

MANUFACTURERS RECORD



RULE OR RUIN

The Labor Relations Act is a major contribution to delay in defense work. Under its provisions employers always are wrong, and labor always right.

The record shows that this one-sided legislative enactment has produced continuous discord and strikes without end, instead of the harmony promised in its preamble.

In passing it, Congress sowed the wind, and the country is now reaping the whirlwind.

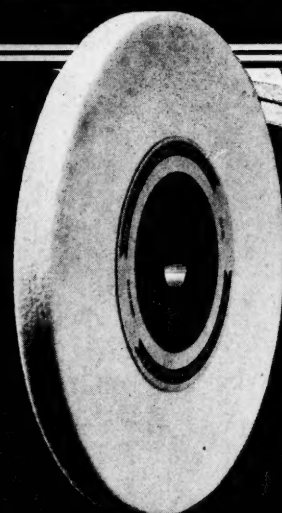
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MANUFACTURERS RECORD

Devoted to the Upbuilding of the Nation Through the Development of the South and Southwest as the Nation's Greatest Material Asset

Published Monthly by the
MANUFACTURERS RECORD PUBLISHING CO.
FRANK GOULD, President

Main Office: Candler Building, Baltimore, Md.
Phone: LExington 7065
Branch Offices: New York—393 Seventh Ave., Room 1615. Phone: Penna. 6-3515
Chicago—28 East Jackson Blvd., Room 712. Phone: Harrison 5867.
Cleveland, O.—Caxton Building, Room 801. Phone: Main 3341.
Miami, Fla.—Ingraham Building. Phone: 3-2445.

Subscription Rates: One Year \$2.00. Two Years \$3.00. Single Copies 25c, back numbers over 3 months old 50c. Other Publications of the Manufacturers Record Publishing Co. Construction (daily and monthly issues) \$10.00 a year. Construction (monthly issues only) \$2.00 a year. Blue Book of Southern Progress (annual) \$1.00 per copy.

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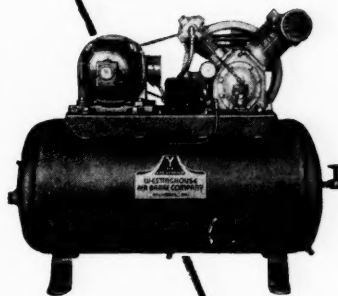
Entered as second class matter at the postoffice, Baltimore, Md., U.S.A., under act of March 3, 1879. Volume 110, Number 10 Monthly

NOVEMBER NINETEEN FORTY-ONE

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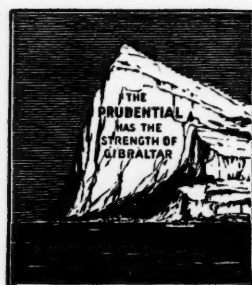
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As the Editor Sees It

Cotton Demand

It is a comforting thought, in view of upset market conditions throughout the world that may last for a long time, that we can process three-fourths or more of a normal cotton crop here at home instead of depending largely upon foreign markets.

American mills now require around 10,000,000 bales to meet the demand for cotton goods. The defense program is partly the reason, but new uses that have been developed for cotton in the domestic market are expected to result in a continuing, larger market at home.

New Taxes

Federal Treasury experts are reported as considering a new tax to be paid by corporate stockholders. They are partners in the enterprise, therefore tax them on *all* of their profits. This would be in addition to the tax on dividends now collected.

Naturally the clamor under such a plan for more dividends would be insistent, and surpluses would be riddled. And yet, while such reserves may be no longer sacred, they kept many a payroll intact in the depths of depression.

Another Grab

News from Washington tells of a proposal to take under control of the national government the entire unemployment compensation system of the country, which will involve control of administrative operations, and the reserve funds now held by separate states estimated at nearly \$2,500,000,000.

Paul V. McNutt, Federal Security Administrator, is quoted as saying that legislation to the above effect has been prepared, and President Roosevelt will recommend its passage. State's rights having gone over the hill long ago, thoughtful people will not be greatly surprised if the plan goes through.

Pulp and Paper Horizon

On another page appear some extracts from an address by James A. Allen, president of the Florida Pulp and Paper Company. Mr. Allen predicts that in the next fifteen years pulp and paper production in the United States will be doubled, and the South will be producing better than 6,000,000 tons of wood fibre annually, requiring approximately 10,000,000 cords of wood every year. He says this can be raised on 40,000,000 acres of land, and lists in a series of items the economic gain running into hundreds of millions of dollars.

After telling of some of the difficulties encountered by pioneers in establishing the pulp and paper industry, which will utilize the great asset the South has in pine forests, Mr. Allen describes what this will mean in increased wealth for the South.

Noise Unlimited

Attention was called in this place last month to the importance of stopping unnecessary and heedless horn blowing by motor car drivers. The practice is becoming so prevalent, that sufferers in hospitals, despite warning signs for blocks around requesting silence, are bombarded night and day by a medley of raucous noises from motor horns.

What we said here a month ago has been taken up with approval by papers of other cities. The nuisance is everywhere, and the country suffers because of the indifference of those who should be restrained.

A Fair Tax

In the plans being suggested for new taxes, a general sales tax applied at the point of final purchase should have favorable consideration. It is the simplest, least complicated, and most effective method of taxation that could be devised.

If we pay a percentage tax on what we buy, it is fair to everybody and will meet with more general approval than any other form of taxation. Applied as a producers' tax it will not work to advantage. Such a tax is passed on and pyramided at every turn-over.

Creative Enterprise

This issue of the MANUFACTURERS RECORD has interesting accounts of the part that established industry and new enterprises are taking in defense.

An article about a new \$2,500,000 defense plant near Dallas, Texas, for the manufacture of radial type, air-cooled Diesel engines for U. S. army tanks is of compelling interest. The only other radial Diesel engines are said to be those made in Germany for use in German war planes.

Western Electric Company has done a successful work in meeting material shortages experienced by the Bell Telephone System. The article tells of the savings in aluminum, nickel, zinc, magnesium and other materials which are vital in the defense program.

There is a description of a 30,000-horsepower plant in the mountains of North Carolina built by the Aluminum Company of America to in-

(Continued on page 8)



WHERE SHOULD YOUR PLANT BE?

● **TO THE FOOD INDUSTRY** the Coastal Southeast offers unlimited opportunity.

● **A LARGE PART** of the country's food-stuffs is grown in that section, yet relatively little of that vast supply is processed there—for example, more than $\frac{3}{4}$ s of the canned goods used in the Southeast are brought in from other sections.

● **THE POPULATION OF THE SOUTHEAST** during the past decade has been growing faster than that of any other part of the nation.

● **MORE THAN 95%** of that growth has been in *non-farm* population—the market for manufactured foods.

● **OUR DEVELOPMENT SERVICE** is thoroughly familiar with agriculture and marketing in the Southeast and will be glad to give you complete and authoritative information of conditions there, without charge.

J. H. Hatcher, Manager Development Service
Wilmington, N. C.





VICTORY begins at a thousand peaceful desks

PEACEFUL desks? Yes... far away from bombs and blitz and bloodshed come the calculations that *must* be made before a new factory is built or a new weapon designed or an employee paid... the calculations whose swift, accurate flow promotes swifter production of the goods to make America strong and secure.

On thousands of such desks, all over America, the Remington Rand Printing Calculator does this time-saving job in three essential ways... as a complete calculating machine providing *printed* electric multiplication and *printed* automatic division... as a fast adding-subtracting-listing machine... and when equipped with wide carriage, as a low-cost statistical machine, able to print calculations directly onto large forms.

In every kind of business today... retailing, wholesaling, banking, shipping, manufacturing... thousands of Printing Calculators are saving time (and thus helping speed distribution and step up factory production) on every kind of calculation... markup, interest, employees earnings, cost estimates, inventories, taxes, invoice and order extending.

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It will pay YOU to investigate the **ONLY** Calculator that **PRINTS** as it divides automatically, as it multiplies, as it adds and subtracts...



The Remington Rand Printing Calculator

As the Editor Sees It

Creative Enterprise

(Continued from page 7)

crease production of the highly important white metal. This is part of a \$200,000,000 expansion program.

A description is printed of the South's first nylon plant by duPont located at Martinsville, Va. This comes in less than 18 months after nylon yarn was introduced to the public in the form of women's stockings.

Space will not permit listing more than a few of the important articles this issue contains.

More than \$2,500,000,000 is the total of Southern construction contracts so far this year. This is far beyond anything of the past for the same length of time.

The Blue Book of Southern Progress

It is expected that there will be published this month the annual Blue Book of Southern Progress, replete with facts and figures of the South's wealth in resources and its remarkable progress in manufacturing, in agriculture and the diversity of opportunities for industry of every kind.

The Blue Book is an invaluable aid to students, public men and industrialists.

Advance orders for this annual production evince a growing interest in the South as a field of opportunity.

Economy Essential

Tax Foundation estimates that total tax collections during the current fiscal year will exceed \$22 billion, or \$166.30 per capita, which would be, on a percentage basis, around 23.5 per cent of national income.

It says further that the ratio of total governmental expenditures to national income is placed at 36.8 per cent for the current fiscal year, and adds "in view of the present and future tax increase occasioned by the defense effort, it becomes increasingly necessary to achieve economy and efficiency in all governmental activities, and to curtail or eliminate non-essential, non-defense items of governmental expense."

About Steel

This is about steel which is indispensable for armaments and the demands of peace. What is said is taken mainly from Steel Facts, the always interesting publication of the American Iron and Steel Institute.

The effectiveness of modern airplanes, tanks, naval vessels and other implements of defense,

as compared with those of World War No. I, is due largely to better steel being available today.

Electric furnace steels are meeting an important requirement in this field. The total output of electric furnace steel during 1941 is estimated at nearly 3,000,000 net tons. This is three times the total production of such steel in the four-year period of 1915-1918, and thirteen times the average annual output during the first World War.

The steel industry's capacity for producing alloy steel is now in excess of 8,000,000 tons a year, and this year's production will not be far from that figure. This is to be compared with 1,550,000 per year from 1915 through 1918.

Steel output as a whole is estimated for 1941 as being close to 90,000,000 tons. In 1938 it was less than half of that. For 1932, the bottom of the depression, it was 15,000,000 tons.

The buying power of steel wages has been doubled since 1918, when steel workers received an average of about 58 cents an hour, compared with an average of 99 cents per hour in 1941. Steel employment and production are at new peaks, and it is interesting to note that more mills are now rolling steel than there were rolling iron 85 years ago.

By-products valued at approximately \$160,000,000 were produced by the steel industry in 1940 in the manufacture of coke from coal. The most important of this was 638 billion cubic feet of gas, some of it being used to heat the coke ovens, some used elsewhere in steel plants for fuel, and the rest was sold.

Over 515,000,000 gallons of tar, valued at nearly \$23,700,000, were recovered from by-product coke ovens. Many important chemicals, likewise, were obtained as coke by-products. A total of nearly 165,000,000 gallons of light crude oil was obtained, most of it being refined in the industry's by-product plants into benzol, toluol, naphtha and other chemicals.

The recovery of ammonium sulphate and ammonia liquor was valued at \$14,500,000.

Homes Needed

A letter from the Chairman of the Emergency Housing Committee of Norfolk, printed on another page, offers inducement to out-of-town builders who will come to Norfolk and erect 10,000 new homes, or any part of them, in lots of 50 or more.

Norfolk's population has nearly doubled in two years. The Navy is centering a large part of its present activity there. Two new shipyards are under way, and new homes for workers are greatly needed. Inducements are offered that should be interesting to builders.



IN STEP *with National Defense*

During our country's national emergency the personnel of the Norfolk and Western Railway is keyed to a point of efficiency never before attained. The workers of the railroad realize that in handling millions of tons of defense materials, and tens of thousands of the armed forces, the N. & W. is doing a tremendous job. Every employee has his shoulder to the wheel, doing his job — and doing it well.

The Norfolk and Western Family is literally "in step with National Defense."

Norfolk and Western Railway

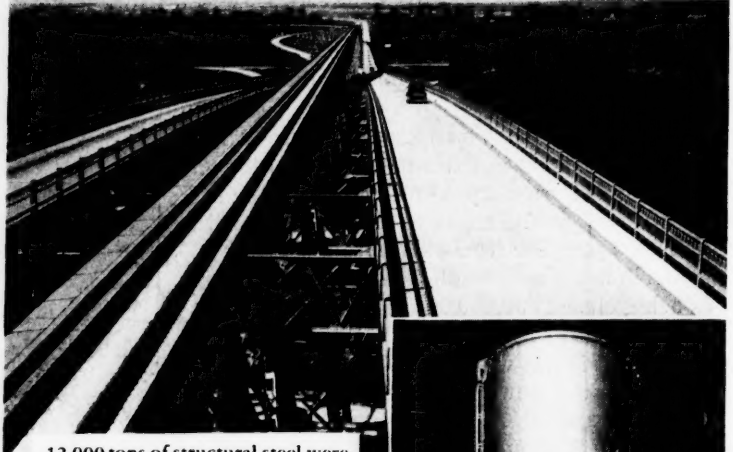
PRECISION TRANSPORTATION
CORP. 1941 N. & W. RY.

BLAZING A HIGHWAY OF STEEL

INGALLS—the nation's largest independent fabricator of structural steel and plate work—has long been identified with new achievements, especially the development of a better technique of arc welding.

Our fabricating shops are strategically located at Birmingham and Pittsburgh. The *only* major shipyard in America built *exclusively* for the production of all-welded ocean vessels is our Pascagoula, Miss., plant.

For every type of steel fabrication, construction and erection, Ingalls service is speedy, efficient, modern.



12,000 tons of structural steel were used in approaches to State Highway bridge, Baton Rouge, La.

THE INGALLS IRON WORKS COMPANY

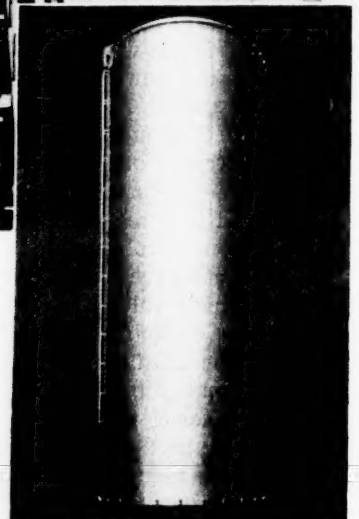
BIRMINGHAM, ALABAMA

Subsidiary Companies and Divisions

THE STEEL CONSTRUCTION COMPANY
THE INGALLS SHIPBUILDING CORPORATION
BIRMINGHAM TANK COMPANY

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NEW YORK • PITTSBURGH • ATLANTA • NEW ORLEANS



One of two standpipes (36' diameter by 93' 9" high) built for City of Morganton, N. C.



The S. S. MORMACTIDE and S. S. MORMACPENN, 100% welded ships built for Moore-McCormack Lines, Inc., contain many exclusive Ingalls design and construction features.



REAPING THE WHIRLWIND

A result of the administration's political course with the leaders of labor is seen in the continuing sabotage of defense.

John L. Lewis calls a strike in insolent defiance of the President's repeated pleas, which he answers when it suits his humor.

Sidney Hillman, Director of the Labor Division of the OPM, despite the savings to taxpayers of \$400,000, refuses a contract for defense housing to a low bidder. Mr. Hillman previously had made an agreement with the leaders of the AFL to give all defense housing work to contractors employing AFL labor. A government official thus arrogantly assumes, regardless of low bids from competent contractors, the right to promise work according to his own ideas.

Carry that to a conclusion and where are we?

And yet what else is to be expected from a labor administration that has put radicals in positions of power and given them authority over the welfare of the people at the most critical time in American history?

Democracy in this country, no matter how much we talk about it, will not be preserved by keeping men in high places who plainly have adopted many of the wild ideas that wrecked France, and are responsible for Europe's chaos.

The major issue involved in the interminable succession of strikes is more privilege and license for radicals who take advantage of a grave emergency to force concessions involving American freedom.

Every man has the right to work when it is offered, and that right, which is now being denied, demands protection by whatever means necessary.

Meanwhile, defense waits upon the whims of selfish men in charge of labor organizations who put their ambitions first and their country last, and Congress waits for the word from the President that will put a stop to a disgusting situation which is fast becoming intolerable. Unless it is stopped the vital aim of the defense program, which can only be accomplished through unity of purpose, will not be attained.

ACTS HINDERING DEFENSE PRODUCTION ARE SABOTAGE

That the country is aroused by the many inexcusable tie-ups in defense production caused by strikes becomes more apparent every day.

The amendment, printed below, was introduced by Senator Josiah W. Bailey of North Carolina and goes to the heart of a matter that demands immediate correction by Congress. In a letter to the **MANUFACTURERS RECORD**, Senator Bailey expresses his view of its importance with which right thinking Americans undoubtedly will agree. Editor.

THE amendment which I have proposed does not mention labor or strikes but does define the crime of sabotage against the national defense in terms of delaying and hindering defense production. It does not raise any question of collective bargaining or the right to organize or the right to strike. It does make it a crime to arrest or hinder or delay defense production in the present emergency. The act is of universal application. The legislation is not class legislation.

No one questions the right of labor to organize. I do not question the policy of collective bargaining and never have questioned that policy.

Our situation is one which requires a definition of sabotage against the national defense in terms of efforts or acts that hinder or delay defense production. Our Country is in a close place. Production not less than men will de-

termine the outcome of the present war. Hitler has swept Europe because he had five years start in production. It will take everything the people of the United States have by way of energy and application and concentration of effort to excel him in production. The German people are organized and they are working like soldiers. It is true that they are under a dictator and under compulsion. The American people would resist properly a dictatorial government; but in order to make that resistance effective, they must do voluntarily what Germans are doing under coercion and necessity. The truth is, we are under a necessity. It is absolutely necessary that we shall concentrate the whole national effort upon production.

Calling a strike now, notwithstanding the Board set up to settle grievances and to make just adjustments, when the effect of

strikes is to delay this production, is inimical to the defense and welfare of the American people.

I am sympathetic with the desire of all men for a better condition in life and for better incomes. The desire for better incomes is a very natural and commendable thing, but good Americans will not undertake to improve their income by forcing situations at the expense of the security of themselves and their Country. I believe the great rank and file of the workers will take this view.

I hesitate to mention anyone in particular but I will refer to Mr. John Lewis. He has put on the strike in the coal mines not for the purpose of increasing wages or improving conditions but only for the purpose of bringing about a closed shop under which men would be compelled to join his union; that is to say, he is placing his special ambition and interest above the national interest and above the interest of the national defense. He should not be permitted to do this. It is a free Country; but when a man undertakes to place his own interest above the interest of his Country, he is taking a position inimical to the security of himself, his followers, and all his fellow citizens.

Our people will shortly realize the necessity for increased production. We must turn the national income into defense production. We must turn the whole national effort into defense production. This will require hardships and sacrifices on the part of all, but the security of this Country cannot be preserved any other way. We cannot go about this matter with half measures. We must go the whole way or not at all.

Our problem is to bring about total effort without invoking the totalitarian scheme of things. We must act voluntarily; but if men refuse to act voluntarily, then we must find the means to prevent them from hindering and delaying production essential to our defense for the sake of the offenders as well as for the sake of all others in this land.

The matter of beating Mr. Hitler is no simple matter. It is the largest task this Country has ever undertaken.

Amendment to House Joint Resolution 237 Sabotage Against the United States of America

SEC. 3. (1) Whoever shall direct, order, or encourage any employee or employer of a plant or factory or corporation engaged in the production of materials or articles ordered by any Department or Bureau or Cabinet official for the national defense, to do any act or omit to do any act or to stop work with intent to retard, hinder, or delay the production of any material or article ordered for the national defense, shall be guilty of the crime of sabotage against the defense of the United States of America, and upon conviction thereof shall be fined not more than \$10,000 or be imprisoned not more than 10 years, or both, as the trial court shall determine.

(2) Whenever two or more persons engaged in or employed in the production of materials or articles ordered by any department or bureau or Cabinet official of the United States for the national defense shall agree to do or omit to do any act with intent to retard, hinder, or delay the production of such materials or articles, such persons shall be guilty of conspiracy to sabotage the national defense of the United States and upon conviction shall be fined not exceeding \$10,000 or imprisoned not exceeding 5 years, or both, in the discretion of the trial court.

(3) Whoever by threat, insult, bribe, or force attempts to prevent any person from doing any work or duty in the production of materials or articles ordered by the executive department of the Government for the national defense shall be guilty of sabotage of the national defense of the United States and upon conviction shall be fined not exceeding \$5,000 or imprisoned not more than 5 years, or both, in the discretion of the trial court.

(4) This section shall be in force until the President or the Congress shall declare the national emergency, heretofore declared, to be at an end.

The President has taken the view that he could bring about voluntary effort on a proper scale by negotiation and by patience. No one questions his capacity as a negotiator; but if it shall appear that negotiation shall not avail, then we must have sterner measures. So far, it appears that negotiation is not effectual.

We have adopted compulsory measures with respect to war service, with respect to very great increased taxation, and with respect to the power of the Government to take over industry. The next step will be to make it a crime for any man willfully and with intent to hinder or delay our production.

We have needed, heretofore, a broad and effectual definition of sabotage in this Country. It is a relatively new thing and our criminal laws have not been adjusted to it. But sabotage can be defined—and defined as the crime that it is. Under the existing circumstances, it can be defined in terms of words and actions with intent to hinder or delay defense production. My amendment undertakes this definition. I realize that it will not be passed as an amendment to the pending legislation, but it has introduced the subject and we will come to legislation of this character. The present situation is making this necessary. Our Country is conducted by public opinion, and public opinion is demanding now that no one shall interfere with the necessary defense production.

I have no question that there are enemies of this Country at work in many fields for the purpose of making it difficult or impossible for this Country to organize and proceed to the full extent that is necessary. I have some information as to the number of fifth columnists at large in the Country but I am not at liberty to disclose it. These fifth columnists are working adroitly and indirectly in many fields. They are working in the labor field. The communists are quite numerous in this Country. A great many of them are more attached to Russia than they are to this Country; and since the sympathy of the American people is largely with Russia, these communists are freer to operate than they have been heretofore. They

are boring in in all directions. Probably they will encourage defense production if they find that the effect will be to aid Russia. This may put them in a position of some favor for the moment, but we should not forget that they are enemies of this Country and any activity on their part of a subversive character here in Washington or over the Country should be punishable as an offense against the United States.

What the average man in America does not realize is that fifth columnists and communists and other enemies of our Republic and its security do not go about their



*Josiah W. Bailey,
Senator from North Carolina*

business by way of making themselves known. Their plan is to bore into organizations with good names and good purposes. They will invade a church just as quick as they will invade a labor union. They will get into religious organizations, labor organizations, and industrial organizations when and if they can; and I deeply regret to say that they bore into our Government and have been boring in for years. The difficulty is to identify them. Their technique is always the technique of deceit. They do not go about their business in a way that advertises their purpose but they accomplish their purpose by indirection.

On my desk are many evidences of their activities. I get letters from good men saying that reports

are being spread in their communities that the Government will soon repudiate its bonds. These reports are being spread in order to head off the purchase of bonds. I have a report today of rumors in agricultural communities to the effect that farmers will not be allowed to have over one hundred cans of canned food and it is useless for them to put up more. These reports are put out by enemies of our Country and, unfortunately, they are spread by good people in perfect innocence. Probably the most plausible man you meet in the course of the day is a fifth columnist. He is your friend, he is labor's friend on the surface, but he is finding ways and means to sow discontent, fear, and defeatism; all with a view to preventing that national unity which is indispensable.

We must make a rule of not being unduly suspicious of our fellow men. There is no reason why men should go to bed at night looking under the bed for a fifth columnist. On the other hand, the time has come when our people must be on their guard against the friendly and plausible stranger who induces some innocent man or woman to spread reports calculated to create distraction and disunity.

Unfortunately, for Mr. Lewis, the organization in which he has influence has openly encouraged communists to join it. With the communists, come also the fifth columnists.

Mr. Lewis is a very able man and he is gifted with unusual personal force. I prefer, for the present, to think that he is not an enemy of our Country but is laboring under a mistaken conception of his place in the national life and that he is putting his own personal ambitions and causes to which he is deeply attached above the interest of his Country. He could be very useful now and he could do a great job for labor and it would be greatly to his credit if he should do this. No one is calling upon him to abandon his efforts to bring about better conditions for the workers but he should confine his efforts to plans that do not interrupt or hinder or delay the national defense effort. Such a course on his part would commend him to the

(Continued on page 66)

AIR COOLED DIESELS FOR TANKS

\$2,500,000 Plant

at Garland, Texas,

to make new type engines

for Army

CONSTRUCTION work commenced in the last week of October on a \$2,500,000 defense plant for the Guiberson Diesel Engine Company of Dallas. The new factory is to be located at Garland, Texas, a few miles from Dallas, and will manufacture radial type Diesel engines for United States Army tanks. The general contract has been awarded the National Concrete and Fireproof Company of Cleveland, Ohio, which agrees to complete the big factory in 97 working days. Tank production is expected to commence by the middle of February 1942. The plant when in operation will employ about 800 skilled workmen.

The new Diesel engine factory is being financed through the Defense Plant Corporation. Title will remain with the government, with the Guiberson Diesel Engine Company leasing and operating it. The factory is located on a 100 acre tract with ample provision for expansion when necessary.

J. Gordon Turnbull of Cleveland, Ohio, is architect and engineer for the Guiberson factory. He is the designer of the large North American Aviation, Inc., of Texas, plant located in Grand Prairie a few miles west of Dallas, which is now in full operation. Roger Spencer, who superintended the building of the N.A.A. plant, will be resident construction engineer for the new enterprise.

The Guiberson factory will be a modern blackout defense plant of concrete and steel with a floor area of 150,000 square feet. It will be windowless with indirect lighting and the \$800,000 worth of precision machinery it will contain is all electrically operated. Both the plant and office building will be air conditioned. There will be a cafeteria, recreation rooms and every other modern convenience for employees. The buildings will cost \$892,000, machinery and equipment over \$1,500,000.

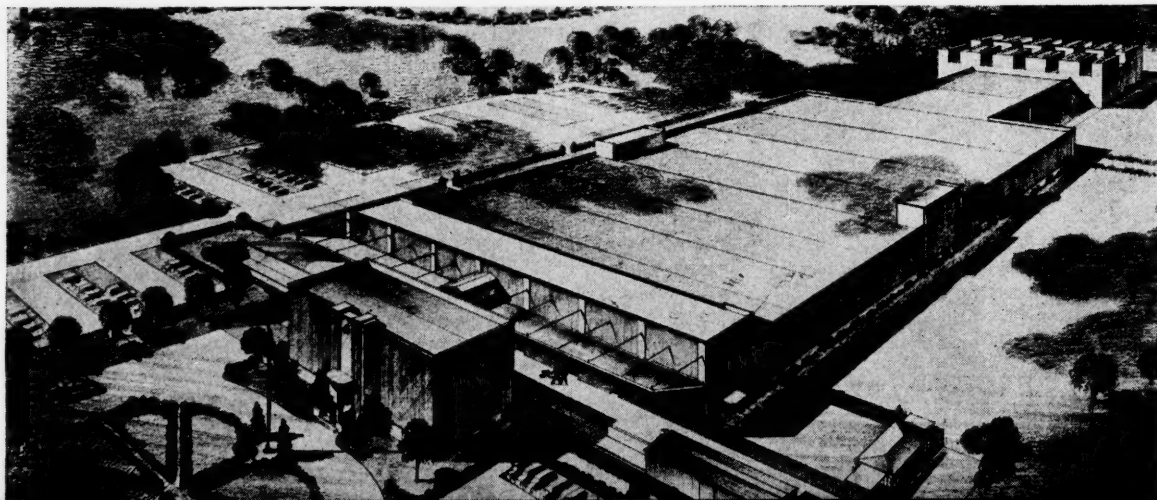
The Guiberson Company is, under a manufacturers agreement, already building radial air cooled engines for light army tanks in the plant of the Buda Company at Harvey, Ill., with contracts totaling \$17,000,000. The Dallas plant will make heavier engines of the same type with an initial order of approximately \$4,000,000 worth of these motors. In order to spread business and to aid smaller manufacturing plants which have been forced to curtail production through lack of material, it is planned to have subcontractors manufacture about 50 per cent of the motor parts.

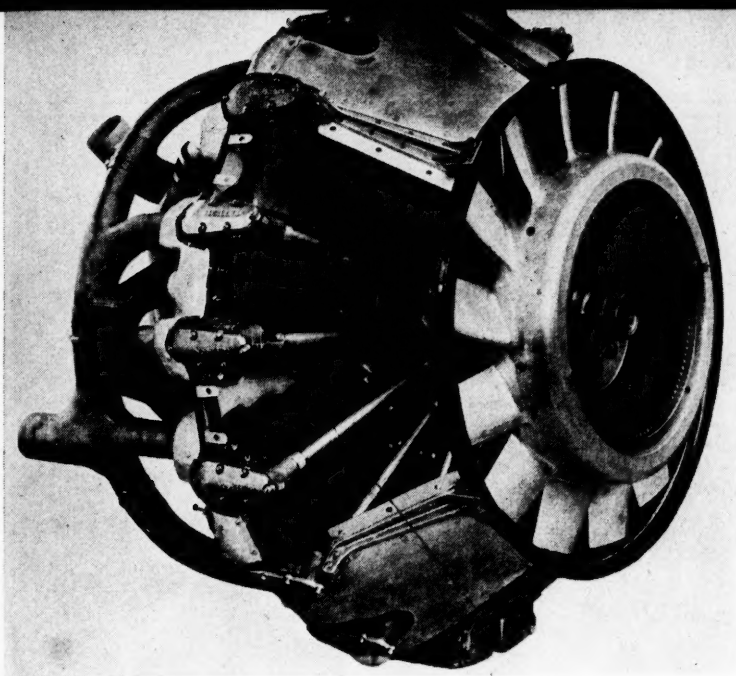
The Guiberson Corporation came to Dallas from California in 1919 and engaged in the manufacture of

oil well tools and specialties. S. A. Guiberson, Jr., president of the corporation, became interested in work being done on a radial Diesel engine which had been invented by Fred Traheld, automotive engineer. In 1929 he formed the Guiberson Diesel Engine Company and since that time has spent some \$1,500,000 developing and perfecting the motor for use in airplanes. In 1934 the United States Navy purchased the motor for air tests, and in 1936 the Ordnance Department of the United States Army began experimenting with the engine for use in army tanks. This radial Diesel engine has been licensed for use in any airplane. The army in 1939 placed its first large order for Diesel engines for tank propulsion, and manufacture was commenced in Illinois through agreement with the Buda Company.

The Guiberson is the only air-cooled radial type Diesel engine in the United States and the only engine made exclusively for tank use. The only other radial Diesel engines in existence are those made in Germany for use in German warplanes. The engine has no spark plugs or ignition system. It can travel through water without

Architect's perspective of the new air cooled Diesel engine plant to be built at Garland, Tex.





The Guiberson Model T 1400 radial type Diesel engine which will be manufactured in the \$2,500,000 defense plant of the Guiberson Diesel Engine Company at Garland, is shown at left and below.

short circuiting, and creates no interference with radio reception. It uses common furnace oil as fuel. This is non-explosive, and even tracer bullets will not ignite it. It is the cheapest and most economical of fuels, and a gallon of it will drive a tank much further than will a gallon of gasoline.

S. A. Guiberson, Jr., president of the company, says that the new factory will be a permanent industry since the company has not given up plans for future large scale manufacture of airplane engines of the radial Diesel type.

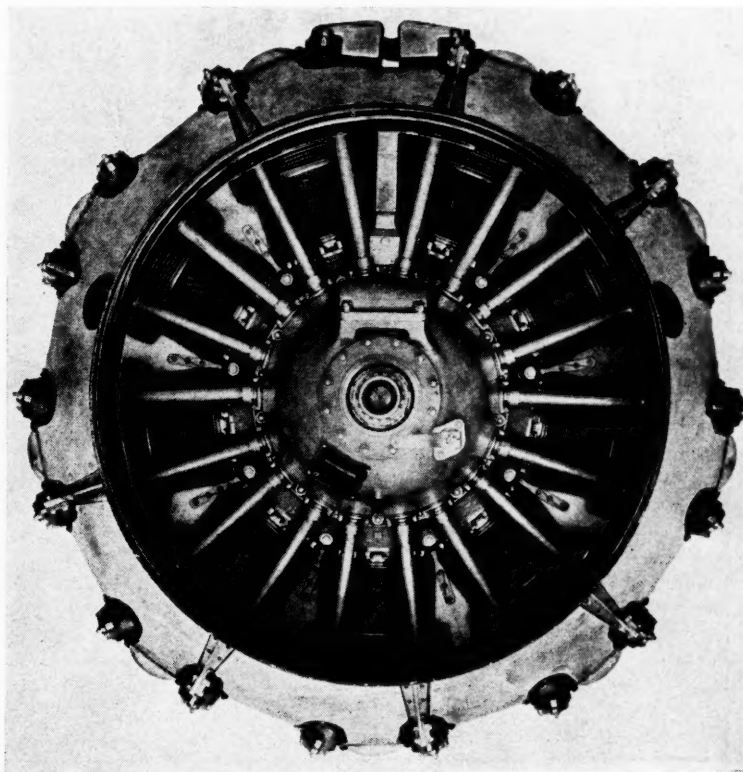
"At present the overwhelming demand is for tank engines and our engine has been redesigned for this purpose," Mr. Guiberson says. "It has been strengthened and made heavier, and although it weighs less than three pounds per horse power its weight is several hundred pounds in excess of permissible weight for use in aircraft. Nevertheless, when the emergency is over we still intend to make this one of the most desirable of aircraft motors. In developing the radial Diesel for use in tanks we have had the tremendously valuable cooperation and assistance of the Ordnance Department of the United States Army."

Ground breaking for the construction of the Guiberson Diesel Engine Company plant was effected through a unique ceremony. It came as the high point in a huge National Defense patriotic rally in

the Cotton Bowl football arena at the State Fair of Texas, Sunday afternoon, October 12th. Twenty-five thousand Texans were in attendance. United States Senator Tom Connally of Texas, Chairman of the Foreign Relations Committee of the Senate, at the conclusion of a stirring speech pressed a button which discharged a load of dy-

namite which tore up the earth on the Guiberson plant site at Garland, 12 miles distant. President Paul Carrington of the Dallas Chamber of Commerce, which had cooperated with the Guiberson executives in securing the factory for Dallas, presented President S. A. Guiberson, Jr., with a silver shovel. This shovel was used for actual ground breaking by Mr. Guiberson before a large gathering of Garland and Dallas residents at the factory site later in the day. Representatives of the Ordnance Department of the United States Army and of the Defense Plant Corporation were in attendance.

Officials of the Guiberson Diesel Engine Company are, President, S. A. Guiberson, Jr.; Executive Vice President, Allen Guiberson; Vice Presidents, Gordon Guiberson, M. W. Mattison and Harry S. Zane, Jr. Allen and Gordon Guiberson are sons of the head of the company.



The National Concrete Fireproofing Co.

General Building Contractors

ESTABLISHED 1898

Dallas, Texas

Indianapolis, Indiana

Cleveland, Ohio

• • •

Defense Projects Which We Are Now Building

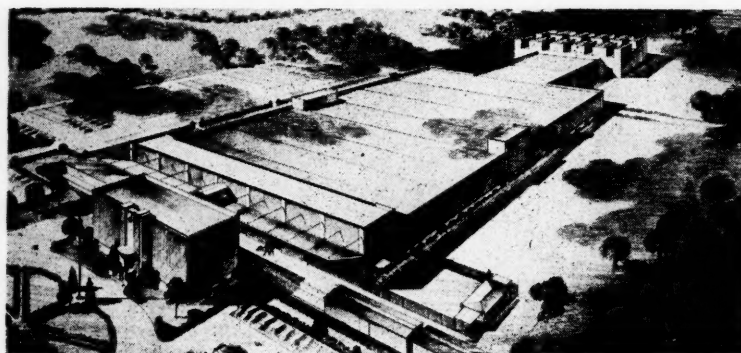
General Contractors for

Guiberson Diesel Engine Company, (see picture below) Garland, Texas

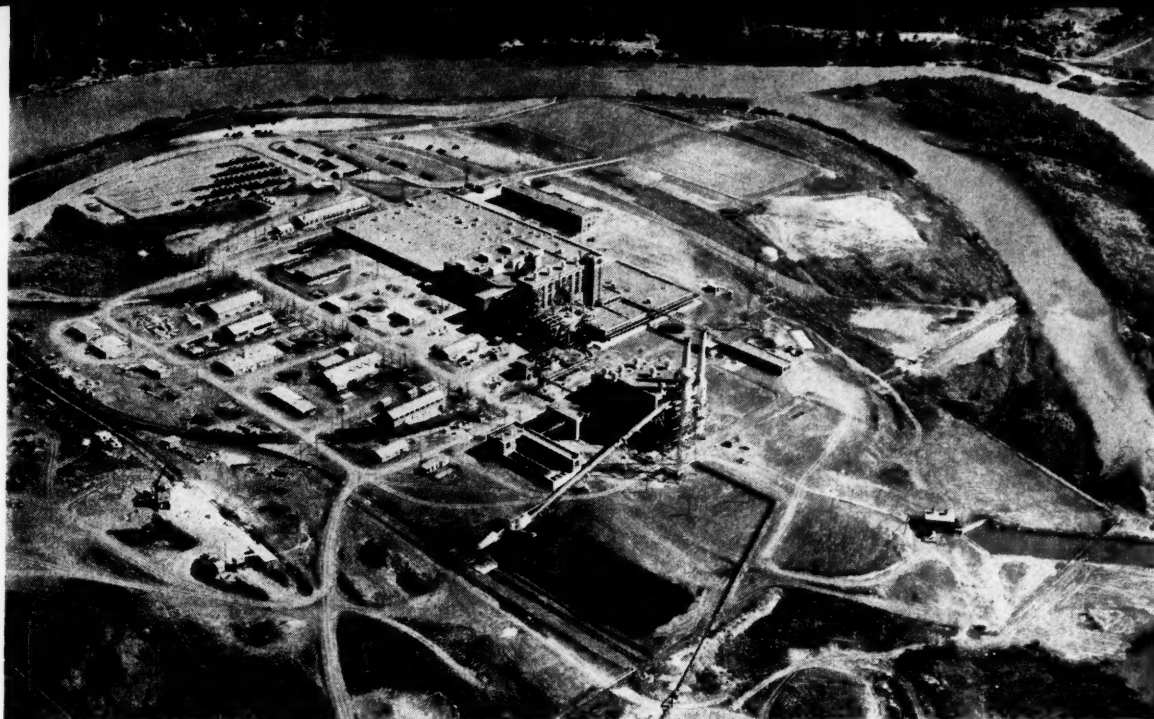
Allison Engineering Division, General Motors Corp., Indianapolis, Indiana

48' Wind Tunnel, Power House and Test Building, Wright Field, Ohio

• • •



*Guiberson Diesel Engine Company's plant at Garland (near Dallas) Texas.
When completed will produce radial type Diesel engines for tanks.*



SOUTH'S FIRST NYLON PLANT

DURING the week of November 3 less than eleven months after ground was broken for a second manufacturing site, production of nylon yarn will start in the duPont Company's new plant at Martinsville, Virginia.

The initial output of the new plant, designed ultimately to double present production, will be devoted entirely to hosiery yarn of 30 denier weight for the legs of women's stockings. Since the huge machines which must be specially designed and built to spin nylon yarn can only be started up one at a time, production will be small at first.

Yarn from the first quantities manufactured will be sent for testing purposes to hosiery mills in the southern area which the plant was built primarily to serve. Here the product as turned out by the new facilities may be evaluated in all the operations involved in manufacturing hosiery, including further "throwing" or processing of the yarn, knitting, dyeing and finishing. Thereafter, volume is expected to increase gradually as new equipment is brought into production, providing the necessary

supplies of raw material become available as now scheduled.

While the Martinsville production is not expected to mean any important increase in shipments to mills for at least two months after the start-up, by early next year yarn from the new plant should begin to be reflected in increased supplies of nylon products for stores and consumers.

The new unit has been designed to double existing output when running at capacity. Full-rate operations may be reached next summer if construction now under way at Belle, West Virginia, on a new factory to produce the essential raw material, nylon polymer, is able to keep pace with the installation of new yarn spinning equipment at Martinsville.

A number of employees have been in training for some time at the Company's original nylon yarn plant at Seaford, Delaware, in preparation for duty at the second plant. Trained operators, most of them from the Martinsville area, are already employed at the new site. Eventually about 1,000 employees will be working there, bringing the total number of jobs cre-

ated by the nylon development within the duPont organization alone to over 3,500 — not to mention those given employment in the consuming industries.

Start-up date of the Martinsville plant comes less than a year and a half after nylon yarn was introduced to the public generally in the form of women's sheer stockings. Since that time nylon has increased in supply until more than 400 mills now use the yarn in the manufacture of hosiery, foundation garments, sewing thread, fish lines, neckties, and other articles.

Nylon likewise has reached the public in a number of other items introduced on a limited commercial scale in order to gauge its value in such new applications. Among these are men's socks, women's and children's anklets, sheer undergarments, gloves, fine lingerie, fabrics for dresses, blouses, shoes and handbags, surgical dressings, sweaters and other sportswear, ribbons, and fabrics for shower curtains, bowl covers, food and garment bags, allergy pillow cases, and others.

In addition to its uses in apparel
(Continued on page 68)



NEW WEALTH IN SOUTH'S PULP AND PAPER

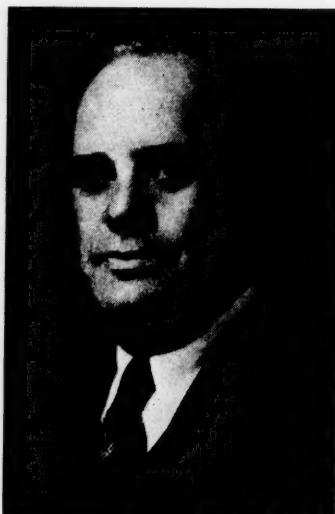
THE South's newest pulp and paper plant, the Florida Pulp and Paper Company of Pensacola has now started operating.

At the dedication ceremonies last month, James H. Allen, president, gave an account of what he described as the company's stewardship. With reference to the southern pulp and paper industry's pioneer efforts and future outlook, Mr. Allen said:

"It is commonly known by those of us who have been interested in the development of Southern forest projects that there are two schools of thought on the building of pulp and paper mills. These two schools of thought have been fighting over this subject for the past fifteen or sixteen years and the fight has been bitter at times."

"We have no bitterness against those in the North who did not want this industrial development in the South; and we have no bitterness for those in the industry who are located in the South who did not want added facilities because it might affect their business by causing, ultimately, surplusage of production. We have no bitterness against those in any of the Federal agencies who, for so many years, failed to see the opportunity offered for the creation of new jobs in this country through forest project developments such as ours here; nor have we bitterness against those banks in New York and Boston who tried to curb the

expansion of the pulp and paper industry to the South. All parties of interest had a motive in seeing either their own community made larger, or their own business more profitable by the policy that called for the limitation of new facilities. We are, however, grateful to those parties of the South and in the North who have contributed so magnificently to the development of the pulp and paper industry in the South. In these groups may be named all of the Southern railroads, many of the Southern banks, some of the Northern banks and a good many of the pulp and paper companies of the North."



James H. Allen, President
Florida Pulp and Paper Company

"We, personally, have been on the side that wanted forest areas developed by the utilization of pulp wood by pulp and paper mills that might be built in right locations throughout the South."

"The Florida Pulp and Paper Company, under its Charter, has as one of its purposes the promotion and management of forest project developments, erection of pulp and paper mill treating plants and sawmills thereon for others. This management shall undertake, from time to time, to manage developments for others."

Future Estimated Developments

"It is our opinion that during the next fifteen years the pulp and paper industry production of the United States should be doubled and, in our opinion, within that time the South will be producing better than six million tons of wood fiber annually. This amount of production will require approximately ten million cords of wood yearly. This quantity of pulp wood can be raised, even under haphazard forest management, on forty million acres of land. The Florida Pulp and Paper Company fully intends to play a part in activities that will put forty million acres of cut-over pine lands of the South to raising cord wood that will produce six million tons of wood fiber."

"Six million tons of pulp and paper production in the South would be equal in fiber weight to

twenty-four million bales of cotton. Here are some of the results that would follow such a volume resulting from proper forest products utilization:

1. 120,000 jobs for men.
2. \$400,000,000 jobs for dollars.
3. Total tonnage wood, chemicals, coal, etc.—40,000,000 tons.
4. \$30,000,000 chemicals, not including chlorine.
5. 4,000,000 tons of coal, or its fuel equivalent.
6. \$12,000,000 maintenance supplies.
7. \$6,000,000 insurance, etc.
8. \$150,000,000 labor and executive payroll.
9. Capital required for 10,000 tons daily expansion—\$200,000,000."

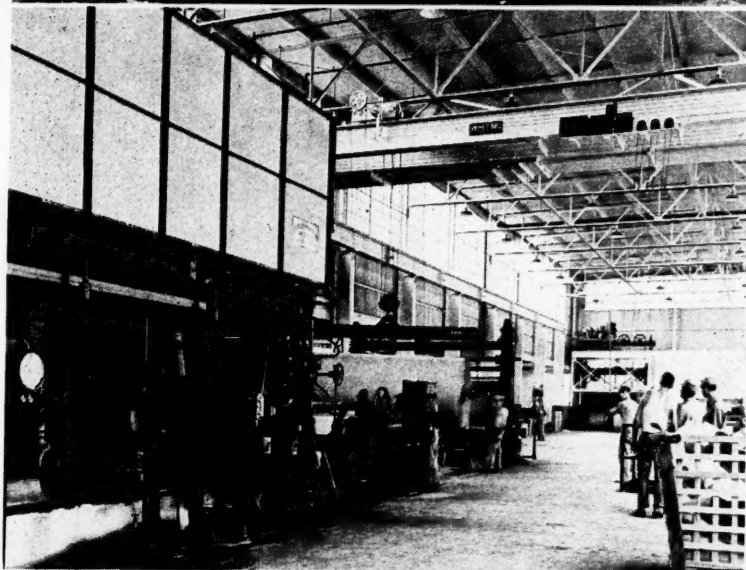
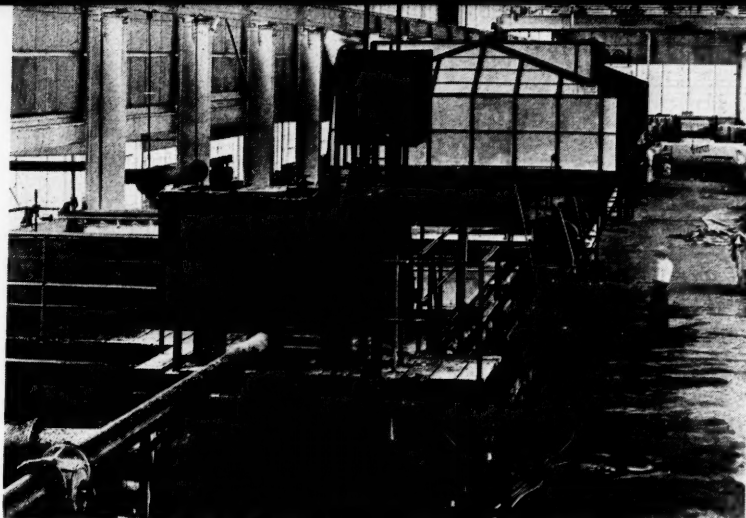
"Results of this investment mean an ultimate savings to every consumer of pulp and paper in the United States. It would put on even terms with the mass producer of the South, the small converting mills of the North whose destructions are now threatened because of the cutting off of pulp supply from the Scandinavian countries. The \$200,000,000 invested in new facilities would create an increased land value on some forty million acres of Southern pine lands of at least \$20.00 per acre, or a new wealth accrual of some \$800,000,000. It is quite apparent that such a new job and a new wealth-creating project as this should and will take place."

Birth Control of Industry

"Notwithstanding the fact that great powers have tried to limit new facilities in the South, the history of the development shows that those forces have not been successful in controlling and increasing the birth rate of pulp and paper mills in the South."

"From the time the Panama City mill was finished in 1931 to the time we started construction of the Union Bag and Paper Corporation's unit No. 1 in July, 1935, no pulp and paper mill was built in the South at all. This notwithstanding, the fact that 52% of the wood fiber sold to the consumers of the United States came out of trees that were raised in foreign countries, and further that we had cut-over pine lands with millions of cords of wood on them that had

reverted to the State of Florida, and other Southern states, for the non-payment of taxes. The lands
(Continued on page 70)



Above—The wet and dry ends of the paper making machine in the new mill of the Florida Pulp and Paper Company at Pensacola, Florida.

TELEPHONE SYSTEM'S SUCCESS IN MEETING MATERIAL SHORTAGE

PROTECTION against raw material shortages, the source of so many production bottlenecks, is in normal times merely a matter of good industrial housekeeping. Now such protection is as vital to the national defense as production itself, for upon this protection production depends.

For a long time the Bell System has been studying how to make the

most effective use of materials, particularly of new materials as they became available. Such studies were begun as long ago as 1925. In 1931, Western Electric acquired the Nassau Smelting and Refining Company for the express purpose of reclaiming waste material developed in the Bell System, foresight that is paying dividends today.

Thanks to this advance preparation, the Bell System is now able to make numerous substitutions in ways that interfere as little as possible with the rendering of grade-A service.

However, whenever the opportunity to use the best possible material is restricted, some penalty is unavoidable. Also certain materials have no substitutes for certain uses. To give only one example, copper may be used in some places instead of aluminum, but there is no substitute for copper. If copper cannot be obtained for needed wire lines, then those lines cannot be built.

If, however, the essentials cannot be obtained as required in the future, the companies must have recourse to various expedients in increasing degree, and perhaps quite rapidly.

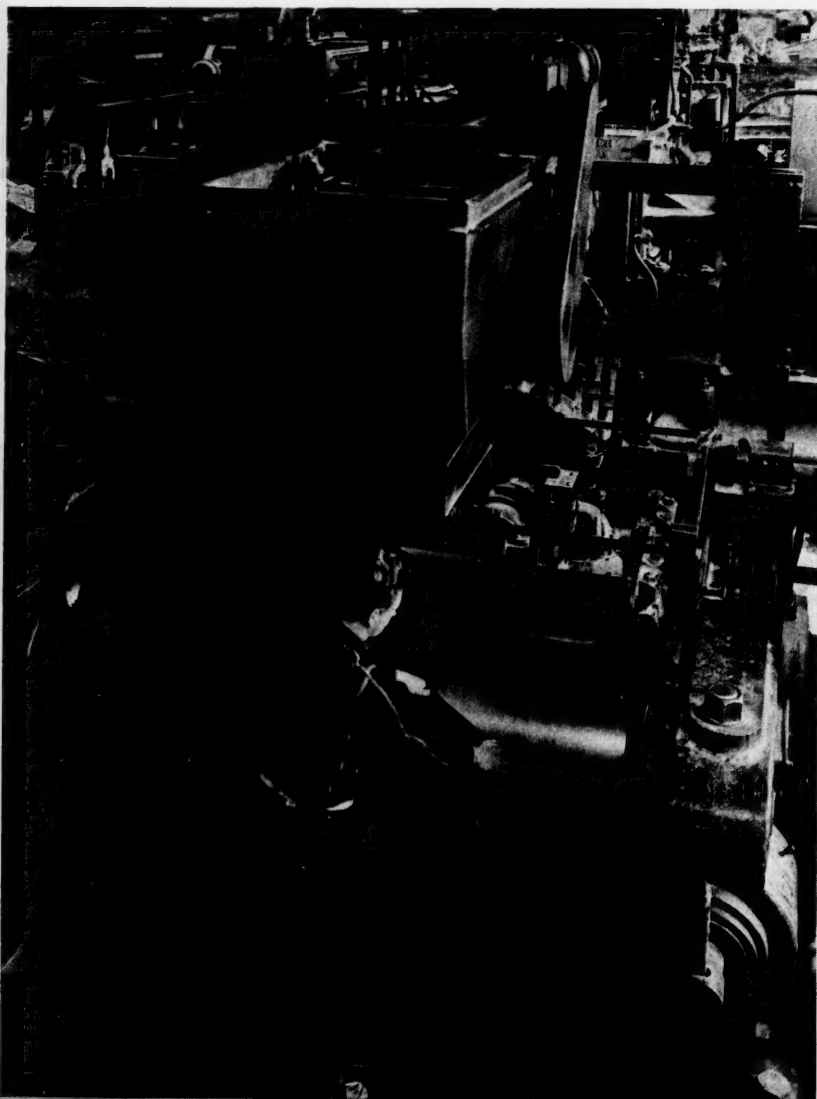
Telephone engineers at A. T. & T. and in the associated companies plan to use old equipment which might normally be replaced, so that the new equipment which might have replaced it can be used somewhere else where the need is greatest.

Dial installations in some communities can be deferred, used switchboards can be reused, cables can be resheathed and reused, desk telephones can be held in reserve so that they will be available for reuse if needed.

As of July 1, 1941, the intended Bell System use of 2,500,000 pounds of aluminum will be reduced by 1,670,000 pounds. The ordinary use of 2,170,000 pounds of nickel will be reduced by 238,000 pounds; the use of 17,000,000 pounds of zinc by 3,380,000 pounds; the use of 10,500 pounds of magnesium by 8,400 pounds. Additional reductions are foreseen for 1942.

The Western Electric substitution program has a direct and obvious bearing on the outcome of the defense program. For example, it is estimated that about 278 fighter

Processing wire insulation on a rubber mill at the Point Breeze Works in Baltimore. By substitutions in a number of manufacturing operations, Western Electric aims at saving about 20 percent of its annual rate of rubber consumption by the end of the year.





Left — Gray paint replaces aluminum paint on telephone cable reels and black paint coats the steel tape used to retain the lap on the reels in place of a galvanized finish at the Point Breeze Works. Below—Pouring molten bronze at the Nassau Smelting and Refining Co., where paper insulated copper wire, the core of scrapped lead covered cable, is used as the base of this alloy.

sium, nickel-steel. Some of the other materials which are rapidly approaching the critical state are phenol plastic, phenol fibre, brass and silk.

65 Tons Aluminum

Western Electric now saves 65 tons of aluminum annually by replacing the aluminum in the dial finger wheel with steel, which serves the purpose adequately. Copper has replaced aluminum in bus bars, and an annual saving of an additional 100,000 pounds of aluminum has thus been effected.

(Continued on page 168)

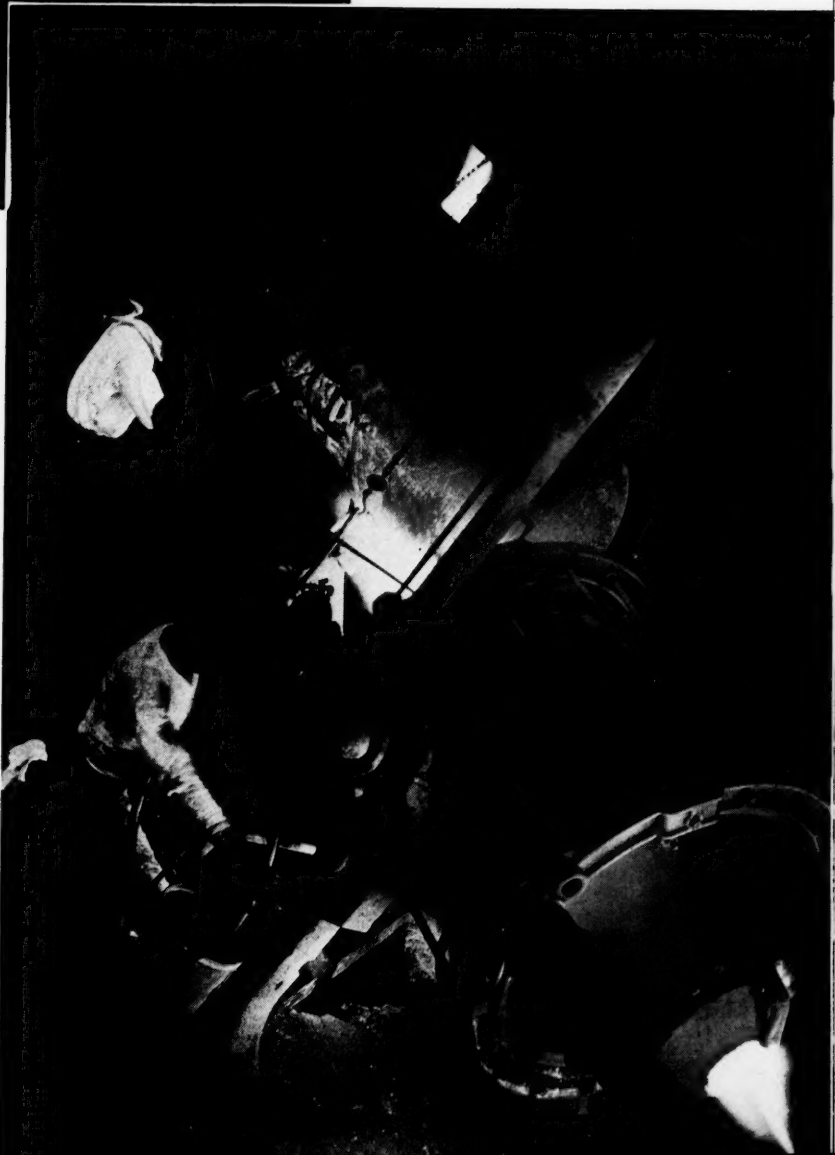
planes might be built with the aluminum the Company will save from its annual rate of consumption this year.

Western Electric and the Bell System are substantially reducing their use of zinc by coating much of their outside plant hardware with lead instead of putting these products through a galvanizing process.

Avoid Redesign

The Laboratories are studying the possibilities of using lead foil for condensers instead of aluminum, of which we would use 125 tons this year. The difficulty is to get the lead foil into the same dimensions as the aluminum and to thus avoid a redesign of the entire condenser, which might then be too big to fit into the limited amount of space available in certain assemblies of apparatus.

Generally speaking, the materials used in Western Electric manufacture which have become most critical are copper, aluminum, zinc, nickel, steel, rubber, magne-





MORE POWER FOR DEFENSE

ALUMINUM Company of America on October 13th placed in operation at Glenville its new 30,000-horsepower hydro electric project located in the mountains of western North Carolina.

The plant is capable of turning out energy enough each year to make the aluminum for 400 of the latest fortress-type bombers.

Gov. J. Melville Broughton, North Carolina's chief executive, pushed the button that started the plant located at Glenville. The 500 or more spectators present

heard a deep roar break the afternoon quiet of the peaceful valley as tons of water from 10-inch nozzles set the two big turbines whirling the generator.

The huge wheels revolving at the rate of 257 times a minute meant that Aluminum Company of America, through its subsidiary, the Nantahala Power & Light Co., had geared nature into a \$200,000,000 expansion program, which also involves a second new generating plant to harness the waters of the Nantahala River farther west in

the Great Smoky Mountains.

Together, the Glenville station and the Nantahala project, as the other undertaking is known, will be responsible for the addition of 37,000,000 pounds per annum of aluminum to the Nation's output. The two are the newest links in a privately financed enlargement started long before the recent agreement under which the Tennessee Valley Authority will operate the Aluminum Company's North Carolina hydroelectric system.

This system includes three plants now operating with 113,000 horsepower. In addition to the new 30,000-horsepower Glenville plant, the Nantahala plant, when completed next summer will have a capacity of 60,000 horsepower.

Site of the proposed Fontana dam was turned over to T. V. A. under the agreement, and Congress is now being asked by T. V. A. for \$40,000,000 of the dam's expected \$50,000,000 cost.

Above—The new Glenville power house during dedication ceremonies. Left—The two taintor gates at Glenville are 25 feet long and 12 feet high. The embankment at the right is the highest of six fuse plug sections, which are designed to fail in case of flood conditions.



Official start of operations at Glenville ended construction work begun during July 1940. At that time a contract was signed with Morrison-Knudsen, Inc., to construct a dam 150 feet high, 900 feet long along its crest and 830 feet at its maximum third dimension. A 400-foot saddle dam to plug a dip in the site was included.

Water is drained from 40 square miles into the 1,470-acre lake area, from which it flows through 16,313 feet of conduit through mountains and down valleys to the brick and white terra cotta power house beside the Tuskaseegee River. Three tunnels were drilled through solid rock to make way for the big pipe, which at the dam is 1,215 feet higher than the tailrace into which the water discharges. The drop is understood to be the highest east of the Rocky Mountains.

Nearly two million man hours were required to construct the Glenville dam, build the power plant and install the equipment. The main dam is a rock and earth fill and with the smaller one involved handling 1,300,000 cubic yards of material, besides 1,155,800 pounds of dynamite.

Formal transfer of the Glenville plant to J. E. S. Thorpe, president of Nantahala Power & Light Co., was made by D. E. Bleifuss, principal hydraulic engineer of the Aluminum Company of America. Mr. Bleifuss substituted for James E. Growden, chief engineer who was suddenly called to another part of the country.

The ceremonies were held in the picturesque Tuskaseegee valley where the generating plant hugs a steeply sloping mountainside now emblazoned with the colorful glory of autumn, intermingled with the darker shades of evergreens.

The principal address was made by Governor Broughton, who pointed out that North Carolina ranks third in water power development in the country, with only New York and California exceeding it. Mr. Bleifuss explained with the aid of diagrams the main features of the Glenville power house, conduit and dam.

S. K. Colby, vice president of the Aluminum Company, said it was easier to understand the plant's output in the number of bombers that could be made from the alumi-

Right top—J. E. S. Thorpe, Nantahala Company head, who acted as master of the Glenville dedication ceremonies. Right center — Governor J. Melville Broughton of North Carolina with Mrs. Broughton and Miss Alice Broughton, were among the prominent guests of the occasion. Right bottom—D. E. Bleifuss, principal assistant hydraulic engineer described the projects features by means of a series of large charts.

num its power produced than from the number of kilowatt hours its generators would grind out in a year.

Sir Herbert Gepp of Australia, now in this country on lease-lend business, outlined to his listeners what his country was doing in the present conflict and how its army of 150,000 was scattered from Suez to Singapore while the women of the country "down under" were taking their places in the factories to turn out the munitions and supplies necessary for the fighting forces.

An informal reception was given at "Pine Tops," summer home of Mr. Thorpe. Dinner was served at nearby High Hampton Inn, near Cashiers.

Among those who spoke were Norman Cocke, vice president of Duke Power Co.; W. E. Mitchell, vice president of Georgia Power Co.; Louis Sutton, head of Carolina Power & Light Co.; Senator James A. Pope, director of the Tennessee Valley Authority; Col. W. C. Tompkins, of the U. S. Army Engineers and D. Hiden Ramsey, general manager of the Asheville *Times-Citizen*.

Others present either at the dedication or the dinner included: Reuben B. Robertson, vice president of Champion Paper and Fibre Co.; Harry Straus, president of Ecusta Paper Corp.; C. R. Shinn, vice president of Morrison-Knudsen, Inc., builders of the new plant; Charles E. Waddell, pioneer consulting engineer of Asheville; Don Elias, president of radio station WWNC; R. L. Smith, Albermarle, N. C.; W. Erskine Smith, Albermarle, N. C.; J. E. Keough, Allis-Chalmers Co., Pittsburgh, Pa.; G. A. Griffin, Morrison-Knudsen, Inc.; J. E. Warren, Bell Telephone, Atlanta, Ga.; V. Rainwater, Atlanta; Mayor Lyons Lee, Asheville, N. C.; P. M. Burdette, City

Manager, Asheville, N. C.; and Harry Parker, Asheville.

Jesse Jones, Federal Loan Administrator, has announced that
(Continued on page 64)



NEW OIL PIPELINE PROPOSED FOR SOUTH

\$25,000,000 line

would connect

Wichita County,

Texas, with

Savannah, Georgia

CONSTRUCTION of an oil pipe line originating in Wichita County, Texas, and proceeding in an almost straight line to Savannah, Georgia, at an estimated cost of \$20,000,000 to \$25,000,000, is the proposal of the Trans-American Pipeline Corporation. This project was conceived as long ago as 1938 by a group of oil producers in north Texas.

Beginning near Wichita Falls, the Tapco oil line would extend eastward for 1,050 miles, passing through, en route, the northern tier of counties in Texas, along the border between Arkansas and Louisiana and on through the states of Mississippi, Alabama and Georgia. For over one-half of its length the line would traverse developed territory, representing over 22% of the total estimated proven petroleum reserves of the United States, and would provide the newly-developed oil lands of Mississippi with the first trunk line outlet.

It is proposed to begin the line with a 10 $\frac{3}{4}$ O. D. pipe line for the first 300 miles or approximately to the east Texas line; from there the size would be increased to a 12 $\frac{3}{4}$ inch line and continue as such to Savannah.

Estimates concerning the cost of the line are as follows: 300 miles of 10 $\frac{3}{4}$ inch pipe line, \$3,193,584; 750 miles of 12 $\frac{3}{4}$ inch pipe line, \$9,444,112.50; six 1200 h. p. pumping stations, each with one spare unit, \$336,000; twenty 1800 h. p. pumping stations, each with one spare unit, \$2,000,000; 1,050 miles of telegraph and telephone line, \$420,000; the pumping stations are tentatively designed for motor drive but if diesel engines are used the estimated costs will be \$7,480,000 instead of \$2,336,000 as shown above; other estimated costs include \$1,500,000 for 3,000,000 barrel underground concrete storage; \$500,000 for Tidewater Terminal; \$500,000 for laterals, and approximately \$1,867,000 for real estate, engineering design, and supervision.

In view of the action of SPAB in rejecting the Texas-New York National Defense Pipe Line request for steel priorities, it should be noted that for the Tapco line the type of pipe required is said to be manufactured by six different concerns and the material would not be in competition with steel plate required for ships. On the other hand, SPAB recognized the vital importance of assuring the eastern seaboard region an adequate supply of oil and pointed out that it may be advisable to build other, less expensive pipelines which, covering shorter distances, would link sources of supply with markets in such a way as to ease the eastern oil supply at a comparatively minor expense in materials. The SPAB added that its action is not to be taken as rejection of the idea of building any pipelines at all, but is applied only to this particular project of Texas to New York.

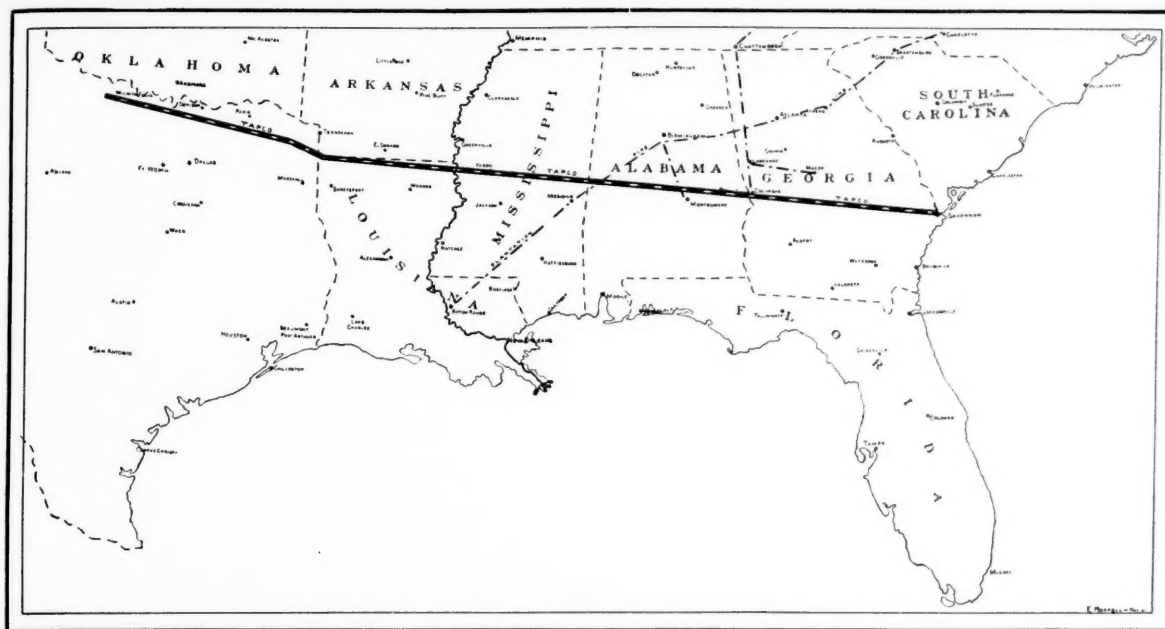
The 10 $\frac{3}{4}$ inch pipe has a wall thickness of .21875, weighing 24.6 pounds per foot or a total tonnage for the 300 miles of 19,485 tons. The 12 $\frac{3}{4}$ inch pipe has a wall thickness of .250, weighs 33.37 pounds per foot, and will require 66,082 tons, bringing the total net tonnage for the 1,050 miles to 85,567. The pumps, multi-stage centrifugal, would be driven by diesel engines, gas engines, or electric motors, according to the power resources of the locality. For the first 300 miles it is planned to have six main line pumping stations of 1200 horsepower each and the remaining 750 miles would be serviced by twenty stations of 1800 horsepower. The operating pressure would vary between 700 and 750 pounds per square inch and the estimated capacity of the line 70,000 barrels daily.

The Tapco line, which would be operated solely as an independent carrier under jurisdiction of the Interstate Commerce Commission with facilities available to all oil

producers and refiners, would traverse a territory whose present prorated daily production is reported as 686,000 barrels while the refining capacity of this same territory is only in the neighborhood of 100,000 barrels, thus leaving over one-half million barrels of oil to move to markets other than local. Officials of Tapco will cause a company to be created for the operation of the line.

At the present time no conclusions have been reached concerning disposition of the oil after it reaches Savannah. Several oil companies, including a group of independent oil producers, have expressed an interest in and are investigating the possibility of establishing their own refineries in the Savannah area. This would not affect the operating company from constructing underground concrete storage tanks at the terminal. Such tanks would be protected from possible enemy attack and, being constructed of concrete, would relieve any necessity for steel demands. Still another possibility is that the Navy, which it is believed has available a certain amount of money for oil storage purposes, might be interested in establishing storage facilities of their own.

The Navy Department has evinced a definite interest in this new line for, though Savannah is not a Navy port, it has ample deep-water facilities. Actually, it is thought that the Navy would be more interested in seeing Charleston, South Carolina, where there is a naval base, established as the line terminal. In any event, the Navy's interest is obvious because of near-



by Norfolk, which is reputed to be the home base of the two-ocean Navy. Executives of the Trans-American Pipeline Corporation are currently considering the extension of a six-inch pipeline from Savannah to Charleston to supply Navy requirements. During hearings before the Senate Special Committee to Investigate Gasoline and Fuel Oil Shortages, the president of Tapco stated that it was his expectation that transportation of crude or refined products from Savannah up and down the Atlantic Seaboard would be made by concrete barges through the interstate inland waterways. Such an expression was indirectly confirmed by Admiral Emory S. Land, Chairman of the Federal Maritime Commission, who said before the same investigating committee that the Maritime Commission believed that transportation of oil was entirely feasible by means of concrete barges.

It is the opinion of the Navy that the pipeline, itself, would replace about twelve tankers and, in order to complete the line in six months, five construction gangs could be started at four different places, each to lay about 200 miles. This, the Navy considers is one of the company's strong points for it compares with about two years' construction work for another big proposed pipeline.

In such a project as this, numerous considerations have to be taken into account besides those of a purely engineering and construction character. First of all, the project should be approved by the Petroleum Coordinator; in this connection, Ralph K. Davies, Deputy Petroleum Coordinator, states in a letter to the Tapco executives "your pipeline project, insofar as you carry it in your representations, has merit, and if you are successful in meeting the remaining problems incident to carrying your plans to a successful practical conclusion, would be a desirable addition to our petroleum transportation facilities." While this is not a formal approval by the Coordinator for endorsement by the President, it does indicate the favorable attitude with which the line is regarded.

With regard to financing, several possibilities are open. The possibility of obtaining the money from government sources ranks foremost. If the pipeline should be considered sufficiently vital, the entire project may be financed by the Defense Plant Corporation, in which case a certificate of necessity will be issued whereby the operating company may acquire possession by payment of the entire sum over a period of five years. An alternative to this is that the senior money would be derived from the Recon-

struction Finance Corporation while the junior money, or approximately 20%, would come from private sources.

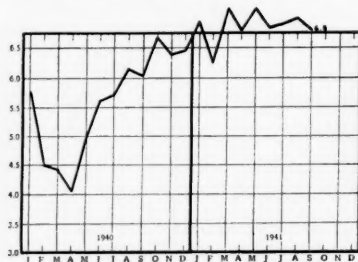
Associated with the corporation as president is E. Stanley Glines, an engineer who for many years was an executive of Stone & Webster. During the last war he was Chief Engineer at Hog Island, subsequently being associated with different concerns to engineer and finance industrial enterprises. The executive vice-president is Aldace Freeman Walker whose grandfather was the first Commissioner of the Interstate Commerce Commission and whose father for many years was counsel for the Pan American Petroleum and Transport Company and Standard Oil Company after 1932. Consulting Engineer is V. G. Shinkle of New York and Texas, who for more than 35 years has been associated with petroleum engineering. Other officers and directors include: H. Sothoron of Washington, D. C., a member of the law firm of Quinter and Sothoron, Washington; Dion S. Birney, lawyer and banker of Washington; Robert T. Highfield, Director of the Mount Vernon Mortgage Company, Washington, D. C., and Emmett C. Davison. The latter is General Secretary-Treasurer of the International Association of Machinists and, in this con-

(Continued on page 67)

Industrial Production Trends

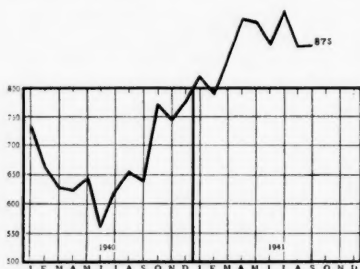
FOR the third month in succession industrial production, on the 1935-1939=100 adjusted index, was 160 in September. The latter however is a preliminary figure and may therefore be adjusted upward when complete returns are in. The corresponding figure for September 1940 was 127.

The operating rate of steel for Sep-



STEEL INGOT PRODUCTION
(Millions short tons)

tember was 96.4% of capacity with a total production for the month of 6,819,706 tons, making the third quarter production the highest of any quarter this year, and the total for the nine months was 61,550,888, nearly 15,000,000 tons higher than the corresponding figure of last year. Preliminary estimates as to the rate of capacity for October show a rise to 98.5%.

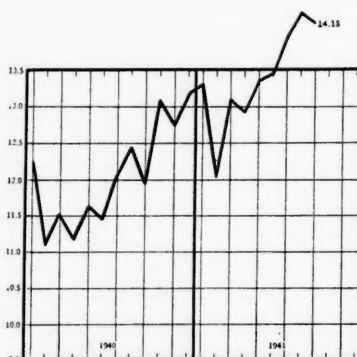


COTTON CONSUMPTION
(Thousands of bales)

Cotton consumption, though still below the July all-time high of 928,943 bales, was slightly above the August figure with 875,682 bales consumed during September. This is nearly 240,000 bales more than the quantity consumed in the same month last year. Cotton spindles during September were slightly less than in August but the September total of 22,963,944 was approximately 700,000 greater than in 1940.

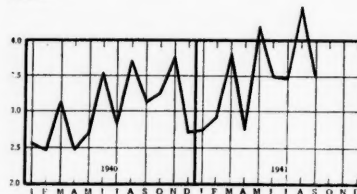
Electric energy for public use pro-

duced during September totaled 14,150,603,000 kw. hrs., a decrease of 162,610,000 kw. hrs. from the August total but the daily average was over 9,000,000 kw. hrs. greater than in August. Hydro-electric production in September increased approximately 80,000,000 kw. hrs. over August.

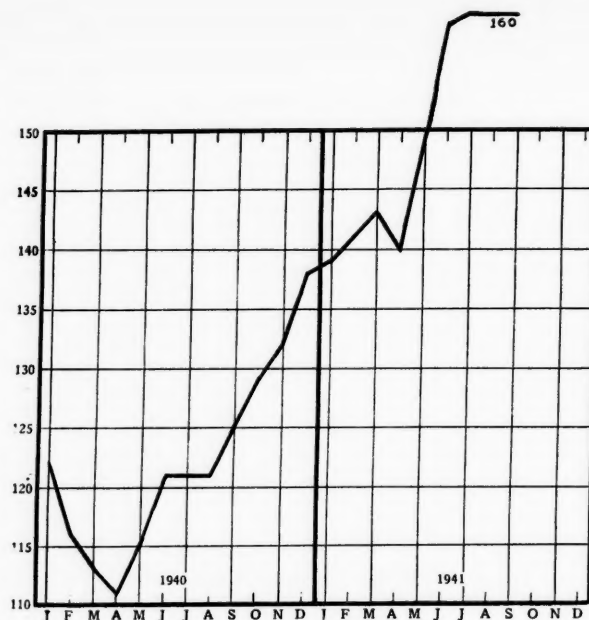


ELECTRIC POWER PRODUCTION
(Billions kilowatt hours)

Carloadings in September numbered 3,539,000 against 4,464,000 in August but the decline was only seasonal, comparing with 3,135,000 in September 1940, while preliminary estimates for October show the total for that month to almost equal that of August, with 4,453,000 cars.

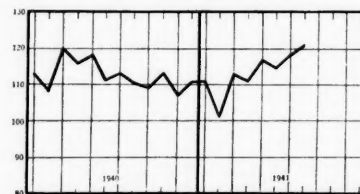


CARLOADINGS
(Millions)



INDUSTRIAL PRODUCTION
(Index 1935-39=100)

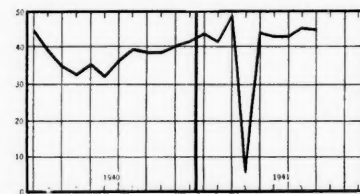
Crude petroleum production broke all records in August, the total being 121,354,000 barrels, with a daily average of 3,914,700 or about 100,000 above the July average. Although production in-



CRUDE PETROLEUM PRODUCTION
(Millions of barrels)

creased substantially, the gain in crude runs to stills was even larger. This, together with reduced imports and heavier exports, resulted in a larger withdraw (5,372,000 barrels) from crude inventories in August than in July or any months since August 1939.

Coal production in September,

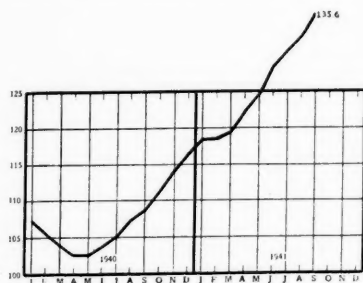


BITUMINOUS COAL PRODUCTION
(Millions of tons)

amounting to 45,464,000 tons, was close behind the August high of 45,650,000. Early returns on October production indicate that for that month the total will closely approximate that of September.

Factory employment in September continued to rise as it has done each month for the past sixteen months and was recorded as 135.6 on the 1923-1925=100 adjusted index. This is a rise of

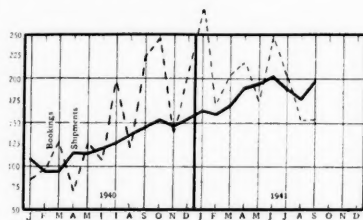
2.1% from August and 21.7% from September 1940. Total civil non-agricultural employment in September amounted to 40,065,000, an increase of approximately 439,000 over August. It was the sixth consecutive month in which employment exceeded all previous levels. Non-agricultural employment has shown an increase of 3,537,000 since September last year and now exceeds the September 1929 peak by 2,595,000.



FACTORY EMPLOYMENT
(Adjusted index, 1923-25=100)

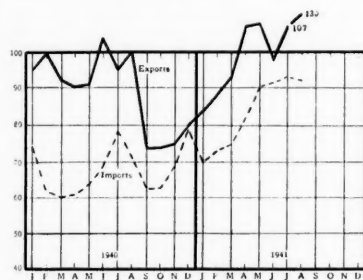
Shipments and bookings of fabricated structural steel during September were above the August totals, being 199,200 tons and 153,168 tons respectively. This compares with 182,353 tons of shipments last month and 142,834 tons in September 1940 while bookings were 152,945 in August and 225,494 in September 1940. The backlog of the industry as of October 1 was 678,540 tons.

Acceleration of the all-out aid to the

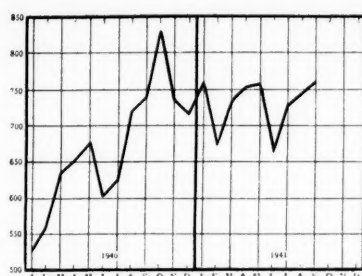


STRUCTURAL STEEL
(Thousands of tons)

democracies was undoubtedly responsible for the rise in exports during August when the 1923-1925=100 adjusted index value jumped to 130 from 107 in July. That this figure will be maintained or surpassed there can be little doubt as more ships are made available for the transportation of needed goods. Imports, on the other hand however, declined slightly from 93 in July to 91



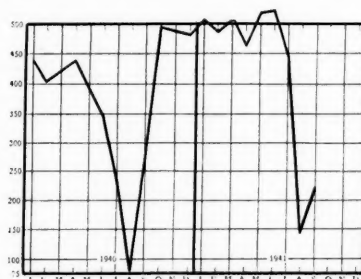
IMPORTS AND EXPORTS
(Adjusted index 1923-25=100)



SOUTHERN PINE PRODUCTION
(Million board feet)

in August. It should be noted however that the decline is somewhat less than seasonal.

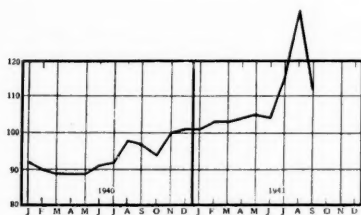
Revised figures for production of southern pine in August show that the total in that month was 748,000,000 board feet, an increase of approximately 14,000,000 board feet over the July total.



AUTOMOBILE FACTORY SALES
(Thousands)

Preliminary figures for September and October point to a slight increase in both of these months and the present rate of production is likely to level off at this point.

U. S. factory sales of automobiles totaled 234,255 in September, an increase of 86,655 over August. While the September total is lower than usual, it compares favorably with the 269,108 total for September 1940. Automobile production is now seriously curtailed



DEPARTMENT STORE SALES
(Adjusted index 1923-25=100)

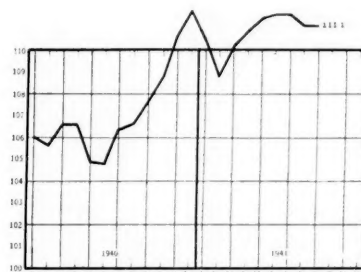
as a result of the defense program.

Preliminary estimates of department store sales in September indicate that on the 1923-1925=100 adjusted index there was a drop to 112 from 134 in August. Though this is an apparent decline, it is actually more in line with the trend of recent months and indicates a leveling off in retail purchasing, the high August figure being accounted for

by midyear sales and early purchasing to avoid imposition of the Federal tax. From now on may be anticipated that there will be a slight decline from month to month.

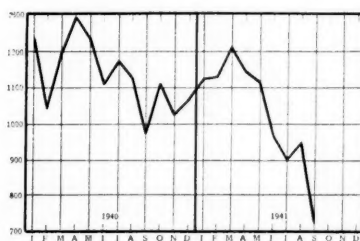
U. S. Treasury bonds in September remained constant with that of August, with an average of 111.1. This constancy, as anticipated here last month, is likely to continue or increase slightly for the next two or three months.

Commercial failures recorded a new low of 735 in September against 954 in



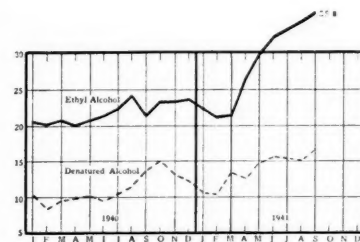
U. S. TREASURY BONDS
(Average price per \$100 bond)

August. The aggregate liabilities declined similarly from \$11,135,000 in August to \$9,393,000 in September. The greatest decline occurred in construction and the only increase was that in manufacturing and mining, which rose from 3,799,000 in August to 4,189,000 in September. Chemicals, which have been coming under the priority control, are showing a marked upward trend in production and consumption with a cor-



COMMERCIAL FAILURES
(Total number)

responding decrease in stocks. This is reflected in the production of ethyl and denatured alcohol in September, amounting to 35,757,000 and 16,908,000 gallons, respectively, against 34,299,000 and 15,065,000 gallons, respectively, in August.



ALCOHOL PRODUCTION
(Millions of gallons)

SOUTHERN AWARDS PASS TWO AND ONE-HALF BILLION

by

S. A. Lauver
News Editor

SOUTHERN contracts for the year so far stand at \$2,514,000,000.

No construction record in the history of the South comes anywhere near this figure. It is a billion dollars ahead of the total for the entire year of 1940; three times as much as the accumulation for the first ten months of that year, which at the time was an unparalleled peak.

Since then the country has been engaged in what is undoubtedly the most hectic period of construction activity it has ever known to provide the facilities for carrying out the current defense effort. Whole army posts have risen in what ordinarily would be the time elapsed during construction of one building. Industrial plants have been finished in the few weeks required for erection of a single dwelling.

The high point in military and naval building construction seems to have been passed. October's total for such work was the lowest in a five-month period. Industrial contract values in the same month, however, accelerated to three times the valuation of the preceding month.

The total of Southern awards, on projects involving \$10,000 and more reported to the *Manufacturers Record*, shows a decline in new work launched during October. While appraisal of the contracts shows a total of \$250,485,000, or more than seventeen per cent above the figure for the same month of last year, there was a drop of about eighteen per cent from the preceding month.

Value of private building also gained momentum as residential expenditures topped the total for September. The October total of \$13,797,000 is about twenty-one per cent above the level for the month before. Steep rises in construction costs are everywhere apparent and there is natural concern about reduction in private work as the result of Federal restrictions which, temporarily, at least, will discourage private enterprise unless the regulations are modified.

Southern industrial construction for the first ten months of 1941 is valued at \$1,120,303,000. Much of this amount is the direct result of injection of Federal funds into the arteries of industry in the race to establish the factories to produce war supplies to combat the aggressive expansions of Germany, Italy and Japan.

October's total of industrial contracts in the South is placed at \$162,863,000. It was made up of a variety of new and expanding industries, although the bulk could be traced to further Federal advances for currently essential activities in various parts of the sixteen States of the South.

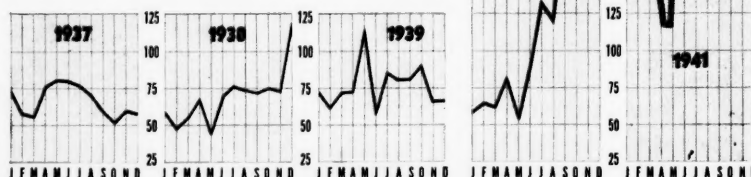
Biggest Southern project proposed or

placed under contract during the month was the \$52,000,000 allocation to Dow Chemical Co. for construction of a third plant to extract magnesium from the Gulf of Mexico at Freeport, Texas, where already operating is a Dow-British financed plant of 18,000,000 pounds capacity and nearing completion is an \$8,000,000 layout of similar capacity financed by the Defense Plant Corporation.

A large part of a \$55,770,000 expansion of Bethlehem Steel Co. will be carried out at Baltimore, where estimates place the amount to be spent at \$35,000,000. The announcement of Federal Loan Administrator Jesse H. Jones stated that pig iron plants would be located at Bethlehem and Steelton, in Pennsylvania; Lackawanna, N. Y., and Sparrows Point, at Baltimore, a 720,000-ton plate mill being included in the work scheduled for the last named point.

Expenditure of \$23,000,000 for constructing a plant to produce anhydrous ammonia and ammonium nitrates was approved for El Dorado, Ark., with Lion Oil Refining Co. recipient of the contract to build and operate the project. The Defense Plant Corporation made the commitment to provide the funds for Austin, Texas, and Carlsbad, N. M., metallic magnesium plants, increasing the previous authorization of \$12,601,347. Union Potash Co., a subsidiary of International Agricultural Co. is to build the plants.

Monthly trends of Southern construction during the last five years are shown in the chart below. The high level of current activity is clearly evident in the years of 1940 and 1941, with the total so far for the latter standing at \$2,514,000,000, or a billion dollars ahead of the 1940 figure and three times as much as the comparable period of that year. The current October total was \$250,485,000. Southern industrial construction for the first ten months of 1941 is valued at \$1,120,303,000. October's total of industrial contracts is valued at \$162,863,000.



MANUFACTURERS RECORD FOR

Three Southern companies will share in the \$15,000,000 to be laid out by the Maritime Commission for additional merchant shipbuilding facilities. Eight ways will be built; two at the Alabama Dry Dock and Shipbuilding Co., Mobile, Ala.; two at Louisiana Shipyards, Inc., New Orleans, La., and three at the Ingalls Shipbuilding Corp., Pascagoula, Miss.

Maryland Dry Dock Co., Fairfield, Baltimore, started a \$5,000,000 expansion, adjacent to the huge operations of Bethlehem-Fairfield Shipyards, Inc., where way construction is proceeding simultaneously with the building of Liberty "ugly ducklings" which are scheduled to be launched at the rate of one a month. A 6,000-ton floating dock for Charleston Shipbuilding and Dry Dock Co. will cost \$2,000,000 and is in addition to \$1,000,000 now being spent at that South Carolina plant. About \$500,000 was tentatively allotted to Tampa Shipbuilding Co., Tampa, Fla.

A lease agreement with the Defense Plant Corporation will result in erection of a \$14,000,000 plant for manufacture of steel armor plate for tanks at St. Louis, Mo. General Steel Castings Co., of Eddystone, Pa., was the second party to the contract. Contract was let for the \$2,411,000 plant to be built at Garland, near Dallas, Texas, where Guiberson Diesel Engine Co. will produce Diesel engines for tank installation. Title for the facilities will remain with the Defense Plant Corporation.

Statistics of South's Construction

	October, 1941 Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Ten Months 1941	Contracts Awarded First Ten Months 1940
PRIVATE BUILDING				
Assembly (Churches, Theatres, Auditoriums, Fraternal)	\$1,607,000	\$1,528,000	\$16,820,000	\$16,938,000
Commercial (Stores, Restaurants, Filling Stations, Garages)	1,920,000	730,000	\$24,794,000	25,829,000
Residential (Apartments, Hotels, Dwellings)	9,910,000	3,567,000	86,071,000	82,026,000
Office	360,000	45,000	12,213,000	10,296,000
INDUSTRIAL	\$13,797,000	\$5,870,000	\$139,898,000	\$135,089,000
PUBLIC BUILDING	\$162,863,000	\$115,157,000	\$1,120,303,000	\$254,392,000
City, County, State, Federal	\$27,632,000	\$40,022,000	\$757,040,000	\$322,309,000
Housing	17,756,000	37,438,000	136,365,000	78,784,000
Schools	4,313,000	14,158,000	32,307,000	22,707,000
ENGINEERING	\$49,701,000	\$91,618,000	\$925,712,000	\$423,800,000
Dams, Drainage, Earthwork, Airports ..	\$5,814,000	\$43,813,000	\$112,480,000	\$52,608,000
Federal, County, Municipal Electric ..	3,381,000	21,892,000	57,513,000	59,864,000
Sewers and Waterworks	4,379,000	38,069,000	20,841,000	9,392,000
ROADS, STREETS AND BRIDGES	\$10,550,000	\$24,303,000	\$137,791,000	\$126,527,000
TOTAL	\$250,485,000	\$340,812,000	\$2,514,638,000	\$1,061,672,000

Plans are being drawn for the third aluminum plant of Reynolds Metals Co., already the operator of a 40,000,000-pound virgin aluminum factory at Listerhill, Ala., and one in the Pacific northwest. The new plant is expected to increase the company's output to 160,000,000 pounds.

Plantation Pipe Line Co. made awards for booster stations in connection with its oil products line now under construction between Baton Rouge, La., and Greensboro, N. C., as the Trans-American Pipeline Corp., of Washington, D. C., announced a \$20,535,390 project to run from Wichita Falls, Texas, to Savannah, Ga.

Proceeds of a \$5,600,000 securities issue sold by Gulf Power Co., of Pensacola, Fla., will be used to finance an extensive expansion program, including a 20,000-

kilowatt steam plant estimated to cost \$2,500,000. First steps were taken by Duke Power Co. toward construction of a new hydroelectric project in North Carolina when 12,000 acres of land were purchased in upper Transylvania County. Plans proceeded on a 35,000-kilowatt steam electric station to be erected at Houston, Texas, by Houston Lighting & Power Co.

Proposed enlargement of Union Bag & Paper Corp., of Savannah, Ga., would add a 234-inch paper machine under a \$4,600,000 expansion program to increase the daily output from 692 to 1,000 tons of kraft board and involve addition of a million feet of floor space. Scheduled to start soon is a big program for expanding the Baton Rouge, La. plant here Solvay Process Co. makes soda ash.

Construction and equipment of plants to cost \$3,283,010 is to be carried out at Wheeling, W. Va., and East Chicago, Ind., by Continental Roll & Steel Foundry Co. Site was purchased at Baltimore for the \$3,000,000 plant to be built by the Federal Government and operated by Revere Copper & Brass, Inc. Negotiations were concluded for erection of the \$3,340,844 oleum plant at Copperhill, Tenn. The War Department will be the owner; Tennessee Copper Co., of New York, the operator.

American Rolling Mill Co., of Middletown, Ohio, under a Defense Plant Corporation lease agreement will build facilities at Ashland, Ky., to cost \$1,426,000. One plant will produce synthetic scrap; the other, steel ingots. Another DPC project is the \$1,250,000 aircraft engine parts plant covered under an award to the Bartlett Hayward division of Koppers Co.

Fairchild Engine & Airplane Corp., of Hagerstown, Md., let the contract for a \$1,675,967 expansion program. Southern Sugar Co., Clewiston, Fla., received priority ratings for a sweet potato starch plant to be erected under its \$3,000,000 enlargement. A new glass container plant will rise at Waco, Texas, under a contract let by Owens-Illinois Glass Co. Pet Milk Co. acquired the site for a \$500,000 milk evaporating plant at Siloam Springs, Ark.

South's Construction by States

	October, 1941 Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Ten Months 1941
Ala.	\$16,658,000	\$24,780,000	\$244,587,000
Ark.	2,013,000	4,184,000	144,686,000
D. C.	3,590,000	1,638,000	49,310,000
Fla.	14,346,000	39,310,000	113,745,000
Ga.	9,405,000	29,780,000	156,176,000
Ky.	2,697,000	10,694,000	123,382,000
La.	8,877,000	10,913,000	192,080,000
Md.	53,437,000	6,732,000	174,419,000
Miss.	6,329,000	11,654,000	73,330,000
Mo.	2,816,000	6,314,000	98,821,000
N. C.	5,694,000	14,440,000	99,768,000
Okla.	1,614,000	27,548,000	141,213,000
S. C.	4,828,000	5,810,000	61,339,000
Tenn.	6,925,000	4,654,000	166,402,000
Tex.	70,313,000	95,064,000	450,898,000
Va.	12,762,800	46,487,000	142,876,000
W. Va.	4,181,000	1,410,000	81,608,000
Total ..	\$250,485,000	\$340,812,000	\$2,514,638,000

Industrial

(Including Private Utilities)

	October, 1941 Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Ten Months 1941
Ala.	\$12,904,000	\$12,307,000	\$158,371,000
Ark.	23,040,000	570,000	108,033,000
D. C.	100,000	100,000	3,155,000
Fla.	6,935,000	10,512,000	22,371,000
Ga.	4,585,000	9,092,000	32,716,000
Ky.	280,000	5,426,000	53,440,000
La.	3,177,000	4,287,000	123,465,000
Md.	42,986,000	1,781,000	82,575,000
Miss.	3,366,000	4,252,000	32,950,000
Mo.	281,000	130,000	50,133,000
N. C.	586,000	990,000	18,404,000
Okla.	73,000	22,000,000	18,779,000
S. C.	2,175,000	1,050,000	11,405,000
Tenn.	3,336,000	405,000	105,132,000
Tex.	55,071,000	41,947,000	213,631,000
Va.	164,000	283,000	10,207,000
W. Va.	3,304,000	25,000	65,437,000
Total ..	\$162,863,000	\$115,157,000	\$1,120,303,000

Right — The \$35,000,000 layout of Reynolds Metal Co. at Listerhill, near Sheffield, Ala., is to be expanded by construction of a third aluminum plant. The third unit, according to the company's announcement, will be entirely owned by the Reynolds organization. The first two were financed by government loans that held as security the entire 18 plants operating at the time the financing was arranged. It is reported that the new facilities will cost in the neighborhood of \$8,000,000 and will duplicate the aluminum pot rooms already built and shown extending from the tanks in the middle background of the illustration. The plant was originally planned to have five pot rooms, but three were located at Bonneville. It is understood that the new pot rooms will go into the place to the right of the present rooms, the proposed location under the first plan. The huge Listerhill plant was built in six months. It has a rated capacity of aluminum sufficient to produce 100,000,000 pounds of aluminum annually, can pour 40,000,000 pounds of alumina and supply alumina to the Longview, Wash., plant, where 60,000,000 pounds of aluminum will be produced each year.



National Defense Program Awards in the South

ALABAMA

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$383,589,000
Maritime Commission	68,823,000
Civil Aeronautics Authority	339,000
U. S. Housing Administration	3,976,000
Public Buildings Administration	1,409,000
Works Progress Administration	5,310,000
Office of Education	1,889,000
National Youth Administration	1,354,000
Reconstruction Finance Corporation	19,217,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps

The Andala Co., New York, N. Y. (Mill: Andalusia), 100,000 flannel, O. D. shirts, \$50.00.	
Gardiner-Warring Company, Florence, 330,000 winter undershirts, \$346,327.	
Gardiner-Warring Co., Florence, 500,000 cotton undershirts, \$99,351.	
Gardiner-Warring Co., Inc., Florence, 1,000,000 cotton undershirts, \$174,125.	

Ordnance

Tennessee Coal, Iron & R. R. Co., Birmingham, forgings, \$260,000.	
U. S. Pipe & Foundry Co., Birmingham, shells, \$694,572.	

*C. G. Kershaw Construction Co., Birmingham; Enngineers, Ltd., San Francisco, California and Walter Butler Company, Minneapolis, Minnesota, Construction of the Redwood Ordnance Plant, Huntsville. (Design and Supervision of Construction: Whitman, Requaardt & Smith, Baltimore, Maryland), estimated cost \$4,606,000.	
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Supplies and Accounts

Hardie Tynes Manufacturing Co., Birmingham, air compressors, \$61,400.	
J. W. Wells Lumber Co., Montgomery, lumber, \$60,389.	

Corps of Engineers

Star Manufacturing Co., Oklahoma City, Oklahoma, furnishing hangars at Dothan and Tuskegee Airfields, \$111,699.	
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ARKANSAS

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$108,781,000
Works Progress Administration	1,331,000
Office of Education	1,158,000
National Youth Administration	911,000
Reconstruction Finance Corporation	433,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Supplies and Accounts

International Minerals & Metals Corp. (Manufacturer: Eagle Picher Mining & Smelting Co., Van Buren), zinc, \$33,058.	
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FLORIDA

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$196,332,000
Civil Aeronautics Authority	1,042,000
U. S. Housing Administration	2,636,000
Public Buildings Administration	2,581,000
Works Progress Administration	14,239,000
Office of Education	1,787,000
National Youth Administration	707,000
Reconstruction Finance Corporation	7,862,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Federal Loan Agency

*Gulf Power Company, Pensacola, construct generating plant and transmission lines, \$3,600,000.	
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Ordnance

Intercontinental Aircraft Corporation, Miami, forgings, \$250,000.	
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GEORGIA

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$178,781,000
Civil Aeronautics Authority	564,000

September Contracts for \$1,000,000 and more are denoted by ★

Federal Works Agency	664,000
U. S. Housing Administration	3,346,000
Public Buildings Administration	2,517,000
Works Progress Administration	4,068,000
Office of Education	1,983,000
National Youth Administration	1,509,000
Reconstruction Finance Corporation	416,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Ordnance

The Murray Co., Atlanta, shells, \$324,000.	
The Murray Co., Atlanta, lathes, \$458,502.	

Quartermaster Corps

Eagle & Phenix Mills, Columbus, 1,000,000 cotton, herringbone, twill cloth, \$349,300.	
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KENTUCKY

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$72,215,000
Civil Aeronautics Authority	324,000
Public Buildings Administration	2,753,000
Works Progress Administration	5,093,000
Office of Education	1,665,000
National Youth Administration	1,176,000
Reconstruction Finance Corporation	40,100,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Ordnance

*Tube-Turns, Inc., Louisville, shells, \$1,970,000.	
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Air Corps

Standard Oil Company, Louisville, fuel, \$11,580.	
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LOUISIANA

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$168,686,000
Maritime Commission	44,341,000
Civil Aeronautics Authority	841,000
U. S. Housing Administration	1,076,000
Public Buildings Administration	2,216,000
Works Progress Administration	6,014,000
Office of Education	1,538,000
National Youth Administration	1,054,000
Reconstruction Finance Corporation	2,500,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps

Equitable Equipment Co., New Orleans, steel barges, \$266,400.	
Allen Boat Co., Inc., Harvey, steel barges, \$130,000.	

The Alden Mills, New Orleans, 700,000 prs. light wool socks, \$168,250.	
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Ordnance

*Rheem Manufacturing Co., New Orleans, shells, \$1,034,250.	
Thibodaux Boiler Works, Thibodaux, shells, \$900,000.	

Marine Corps

Mente & Company, Inc., New Orleans, sand bags, \$54,500	
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Defense Plant Corporation

*Standard Oil Co. of Louisiana, Baton Rouge, an authorization to provide for construction and equipment to be used in the manufacture of Butadiene, \$7,464,000.	
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MARYLAND

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$732,962,000
Maritime Commission	148,747,000
Federal Security Administration	1,274,000

U. S. Housing Administration ..	1,689,000
Public Buildings Administration ..	6,239,000
Works Progress Administration ..	5,521,000
Office of Education	1,633,000
National Youth Administration ..	733,000
Reconstruction Finance Corporation	912,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Ordnance

Triumph Explosives, Inc., Elkton, signal lights, \$104,900.	
General Motors Corp., Chevrolet Motors Div., Baltimore, trucks, \$160,472.	

Quartermaster Corps

Superior Coat Makers, Baltimore, 50,000 wool, O. D. overcoats, \$170,787.	
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Supplies and Accounts

Samuel M. Dell & Co., Inc., Baltimore, paint brushes, \$149,860.	
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Bendix Aviation Corp., Julien P. Friez & Sons Div., Baltimore, navigation equipment, \$98,895.	
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Acme Steel Enngineering Co., Inc., Baltimore, mooring buoys, \$78,764.	
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The Wolfe & Mann Manufacturing Co., Baltimore, platforms and stands, \$307,956.	
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Air Corps

Mt. Vernon-Woodbury Mills, Inc., Baltimore, cotton, olive drab, army duck, etc., \$96,300.	
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The Glenn L. Martin Co., Baltimore, gun turrets, \$123,071.	
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The Glenn L. Martin Co., Baltimore, tanks and fuel gauges, \$136,040.	
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Signal Corps

Graybar Electric Co., Inc., Western Electric Co., Inc., Point Breeze, telephone cable and reels, \$108,691.	
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Corps of Engineers

The Maryland Drydock Co., Baltimore, conversion of U. S. dredge to supply ship, \$350,000.	
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Defense Plant Corporation

*Bendix Aviation Corp., Eclipse-Pioneer Div., Baltimore, an increase in authorization to be used for additional facilities in the production of aircraft equipment, \$11,816,000.	
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Judge Advocate General

*Triumph Explosives, Inc., Elkton, production facilities, \$1,375,000.	
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MISSISSIPPI

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$134,869,000
Maritime Commission	32,000,000
Public Buildings Administration	148,000
Works Progress Administration	4,664,000
Office of Education	1,595,000
National Youth Administration ..	1,055,000
Reconstruction Finance Corporation	3,477,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps

Irwin B. Schwabe Co., Inc., New York, N. Y. (Mill: New Albany), 125,000 flannel, O. D. shirts, \$62,344.	
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Picayune Shirt Factory, Inc., Picayune, 100,000 flannel, O. D. shirts, \$50,000.	
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Stahl Urban Co. & Brookhaven Mfg. Co., Brookhaven, 100,000 cotton, khaki trousers, \$57,942.	
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Reconstruction Finance Corporation

*Mississippi Power Co., Gulfport, construct generating plant and transmission lines, \$3,200,000.	
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MISSOURI

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$610,979,000
Federal Works Administration ..	1,466,000
Public Buildings Administration ..	1,891,000
Works Progress Administration ..	17,918,000
Office of Education	1,683,000
National Youth Administration ..	1,570,000
Reconstruction Finance Corporation	406,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Air Corps

Butler Manufacturing Co., Kansas City, prefabricated portable warehouses, \$250,308.
Standard Steel Works, North Kansas City, stand assemblies, \$450,000.
Cowden Mfg. Co., Kansas City, mechanics' suits, \$106,530.
Emerson Electric Manufacturing Co., turret assemblies, \$8,025,000.

Quartermaster Corps

Smith & Davis Manufacturing Co., St. Louis, 50,000 folding steel cots, \$168,000.
Brown Shoe Co., St. Louis, 20,004 prs. service shoes, \$74,215.
International Shoe Co., St. Louis, 45,204 prs. boots, \$337,222.
Brown Shoe Company, St. Louis, 25,008 prs. service shoes, leather soles, \$92,750.
Miller Mfg. Co., Inc., Joplin, 100,000 flannel, O. D. shirts, \$50,000.
Brown Shoe Co., Inc., St. Louis, 31,250 prs. low quarter tan shoes, \$96,562.
International Shoe Co., St. Louis, 125,000 prs. low quarter tan shoes, \$380,000.
International Shoe Co., St. Louis, 18,000 leather, legging top, boots, \$130,500.
International Shoe Co., St. Louis, 90,000 prs. service shoes, composition soles, \$311,400.

Ordnance

★Sefton Fibre Can Co., St. Louis, containers, \$1,019,432.
★The Hercules Powder Co., Wilmington, Delaware: (Design, construction and equipping: Bechtel-McCone-Parsons Corporation, Los Angeles, California), for management services during construction, procurement of equipment and, at the option of the government, to train key personnel and operate an anhydrous ammonia plant, Missouri Ordnance Works, Louisiana, Missouri, estimated cost \$16,073,800.
Sheffield Steel Corp., Kansas City, forgings, \$600,000.
Century Electric Co., St. Louis, forgings, \$384,000.

★Wagner Electric Corp., St. Louis, shot, \$1,530,000.

American Thermometer Co., St. Louis, boosters, \$980,000.

Corps of Engineers

Chicago Pneumatic Tool Co., St. Louis, electric drills and drill jigs, Fort Crook Aircraft Assembly Plant, Nebraska, \$75,877.
Chicago Pneumatic Tool Co., St. Louis, pneumatic riveting hammers, Aircraft Assembly Plant, Fort Crook, Nebraska, \$96,960.

Supplies and Accounts

R. D. Pringle & Co., (Manufacturer: Bliss Syrup & Preserving Co., Kansas City), commissary stores, \$56,519.
Alligator Co., St. Louis, clothing, \$73,200.

Signal Corps

Mines Equipment Co., St. Louis, cable assemblies and reels, \$194,233.

Reconstruction Finance Corporation

Keystone Trailer & Equipment Co., Inc., Kansas City. To be used in the manufacture of trailer equipment for the Army, \$240,000.

NORTH CAROLINA

Value of Total Awards June 1940
Through September 1941

Army and Navy	\$133,487,000
Maritime Commission	64,549,000
Federal Security Administration	70,000
Federal Works Administration	4,170,000
U. S. Housing Administration	2,220,000
Public Buildings Administration	1,543,000
Works Progress Administration	6,112,000
Office of Education	1,825,000
National Youth Administration	1,560,000
Reconstruction Finance Corporation	5,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps
Washington Mills Co., Mayodan, 75,000 winter undershirts, \$68,175.
Washington Mills Co., Mayodan, 150,000 wool

undershirts, \$184,350.

North Carolina Finishing Co., Salisbury, 800,000 yds. cotton, O. D. drill, \$193,610.

★National Weaving Co., Inc., Lowell, 3,000,000 yds. cotton cloth, \$1,859,200.

Shelby Cotton Mills, Shelby, 186,000 yds. cotton, uniform, twill, khaki cloth, \$70,680.

Erwin Cotton Mills Co., Cooleemee, 475,000 cotton, uniform, twill, khaki cloth, \$179,217.

★Cramerton Mills, Inc., Cramerton, 5,000,000 yds. cotton, uniform, twill, khaki cloth, \$2,801,700.

Erwin Cotton Mills Co., West Durham, 60,000 cotton sheets, \$57,600.

P. H. Hanes Knitting Co., Winston-Salem, 300,000 cotton undershirts, \$55,410.

Amos Hosiery Mills, High Point, 1,500,000 prs. light wool socks, \$368,400.

Waldensian Hosiery Mills, Valdese, 988,512 prs. light wool socks, \$243,968.

Cone Export & Commission Co., Greensboro, 1,600,000 yds. cotton herringbone twill cloth, \$562,880.

Cone Export & Commission Co., New York, N. Y. (Mill: Greensboro), 750,000 yds. cotton herringbone twill cloth, \$263,850.

Pee Dee Mfg. Co., Royal F. Spatz, Attorney, New York (Mill: Rockingham), 1,250,000 yds. cotton drill, \$299,375.

Arkwright Mills, Royal F. Spatz, Attorney, New York (Mill: Erwin Cotton Mill, Cooleemee), 250,000 yds. cotton drill, \$60,100.

Supplies and Accounts

Leaksville Woolen Mills, Inc., Charlotte, blankets, \$245,242.
Windsor Co., Cannon Mills Co., Kannapolis, towels, \$166,817.

Chatham Mfg. Co., Elkin, wool blankets, \$317,000.

Erwin Cotton Mills Co., West Durham, cotton sheets, \$103,942.

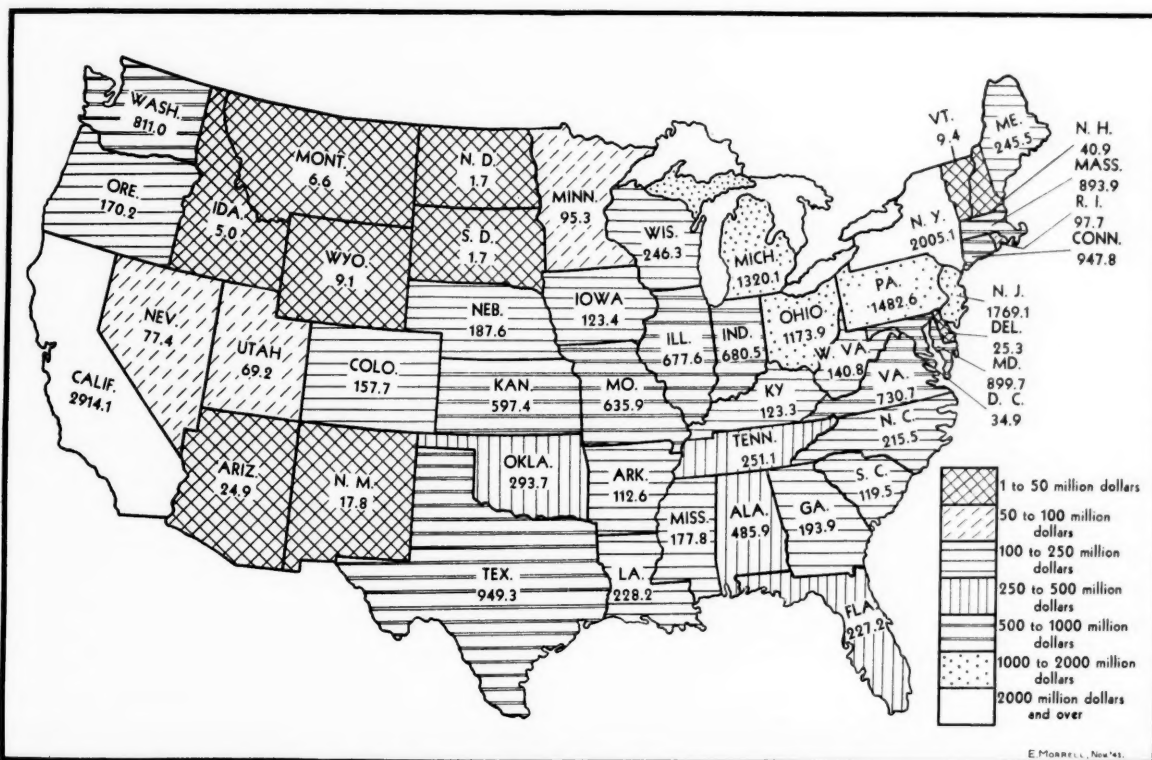
Corps of Engineers

Edwards Co., New York, N. Y. (Plant at Sanford), railroad cars, \$125,000.

Marine Corps

J. W. Wells Lumber Co., Hallshoro, lumber, \$75,500.

Defense contract awards of all Federal agencies through September was \$24,533,334,000. Of this, \$5,920,492,000 has gone to southern states. Totals for each state are shown on the map below in millions of dollars.



Defense Plant Corporation
Wright's Automatic Packing Machine Co., Durham, an increase in authorization from \$350,000 to \$500,000 to provide for construction and equipment to be used in the production of gunfire control equipment, \$150,000.

OKLAHOMA

Value of Total Awards June 1940
Through September 1941
Army and Navy\$286,935,000
Civil Aeronautics Authority 549,000
Public Buildings Administration 465,000
Works Progress Administration 3,042,000
Office of Education 1,274,000
National Youth Administration.. 1,211,000
Reconstruction Finance Corporation 210,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Corps of Engineers
***J. B. Klein Iron & Foundry Co.**, Oklahoma City, furnishing structural steel, Midwest Air Depot, Oklahoma City, \$1,208,400.
Capitol Steel & Iron Co., Oklahoma City, hangar door assemblies, Aviation Mechanics' School, Wichita Falls, Texas, \$98,000.
Truscon Steel Co., Youngstown, Ohio, side-walls, Aircraft Assembly Plant, Tulsa, \$241,798.
Truscon Steel Co., Youngstown, Ohio, roof decking, Aircraft Assembly Plant, Tulsa, \$457,617.
Truscon Steel Co., Youngstown, Ohio, furnishing doors, Aircraft Assembly Plant, Tulsa, \$344,029.
Supplies and Accounts
International Minerals & Metals Corp. (Manufacturers: National Zinc Co., Bartlesville; Eagle Picher Mining & Smelting Co., Henryetta), zinc, \$33,058.

Ordnance
***E. I. duPont de Nemours & Co.**, Wilmington, Delaware, for architect and engineering services, construction services, acquisition and installation of equipment, option for training key personnel and operation of the Oklahoma Ordnance Works at Choteau. (Fixed-fee contract), total estimated cost \$84,235,594.
Reconstruction Finance Corporation
Oklahoma Air College, Inc., Oklahoma City, defense loan authorized, \$210,000.

SOUTH CAROLINA

Value of Total Awards June 1940
Through September 1941
Army and Navy\$96,916,000
Civil Aeronautics Authority 1,211,000
U. S. Housing Administration ... 3,660,000
Public Buildings Administration.. 1,059,000
Works Progress Administration.. 14,060,000
Office of Education 1,473,000
National Youth Administration .. 870,000
Reconstruction Finance Corporation 230,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps
Gregg Dyeing Co., Graniteville, 110,000 yds. cotton, uniform, twill, khaki cloth, \$61,050.
West Point Mfg. Co.; Fairforest Finishing Co., Cleveland, 275,000 yds. cotton, herringbone, twill cloth, water-repellent finish, \$126,225.
Graniteville Co. by McCampbell & Co., New York, N. Y. (Mill: Graniteville), 700,000 yds. cotton, herringbone, twill cloth, \$246,260.
Supplies and Accounts
Derry Damask Mill, Inc., Gaffney, damask, \$85,202.
Medical Corps
Convenience, Inc., Greenville, first aid dressings, \$387,162.
Marine Corps
Reeves Brothers, Inc. (Manufacturer: Fairforest Finishing Co., Cleveale), bleached drilling, \$72,270.

TENNESSEE

Value of Total Awards June 1940
Through September 1941
Army and Navy\$242,870,000
Federal Security Administration 115,000

Federal Works Administration.. 787,000
U. S. Housing Administration... 775,000
Works Progress Administration 3,042,000
Office of Education 2,234,000
National Youth Administration.. 1,302,000
Reconstruction Finance Corporation 15,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps
Standard Knitting Mills, Knoxville, 144,000 wool undershirts, \$172,440.
Standard Knitting Mills, Knoxville, 150,000 wool winter drawers, \$136,350.
Downcraft, Memphis, 20,000 cotton filled comforters, \$57,742.
Kingsboro Silk Mills, Daisy, 246,800 yds. mosquito netting, \$76,689.
Dixie Mfg. Co., Inc., doing business as Waverly Garment Co., Columbia, (Mill: Waverly), 100,000 flannel, O. D. shirts, \$50,000.
Southern Mfg. Co., Nashville, 150,000 flannel, O. D. shirts, \$75,000.
O'Bryan Bros., Inc., Nashville, 100,000 flannel, O. D. shirts, \$50,000.
General Shoe Corp., Nashville, 31,250 prs. low quarter, tan shoes, \$97,187.
Chemical Warfare Service
Victor Chemical Works, Mt. Pleasant, white phosphorus, \$120,000.
Monsanto Chemical Co., Monsanto, white phosphorus, \$193,750.
Ordnance
United States Pipe & Foundry Co., Burlington, N. J. (For Manufacture at Chattanooga), projectiles and presses, \$163,845.
Southern Chemical Cotton Co., Factory: Alton Park, cotton lint, \$173,760.
Buckeye Cotton Oil Co., Memphis, cotton lint, \$130,500.
Marine Corps
Lebanon Woolen Mills, Lebanon, blankets, \$287,900.

TEXAS

Value of Total Awards June 1940
Through September 1941
Army and Navy\$339,788,000
Maritime Commission 66,199,000
Civil Aeronautics Authority 2,049,000
Federal Security Administration 109,000
Federal Works Administration.. 1,782,000
U. S. Housing Administration... 2,792,000
Public Buildings Administration 3,321,000
Works Progress Administration.. 13,227,000
Office of Education 4,386,000
National Youth Administration.. 2,959,000
Reconstruction Finance Corporation 13,124,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Yards and Docks
Brown & Root, Inc. & Associates, Corpus Christi, installation, Corpus Christi Naval Air Station, \$348,000.
Quartermaster Corps
Douglas Co., Waco, 37,000 cotton mattresses, \$169,618.
Crawford Austin Mfg. Co., Waco, 40,000 cotton mattresses, \$182,343.
Conro Mfg. Co. of Texas, Dallas, 300,000 cotton khaki trousers, \$180,000.
H. W. Zweig Mfg. Co., Dallas, 100,000 cotton khaki trousers, \$54,931.
J. M. Wood Mfg. Co., Waco, 100,000 cotton khaki trousers, \$56,000.
Waco Garment Mfg. Co., Waco, 125,000 cotton khaki trousers, \$74,750.
Haggar Co., Dallas (Mill: Greenville Pants Mfg. Co., Greenville), 100,000 cotton khaki trousers, \$59,700.
Williamson-Dickie Mfg. Co., Fort Worth, 100,000 cotton khaki trousers, \$61,346.
Corps of Engineers
Johns-Manville Sales Corp., Dallas, transite pipe, Aviation Mechanics' School, Wichita Falls, \$57,757.
Mosher Steel Co., Dallas, structural steel for A. C. Hangars, Aviation Mechanics' School, Wichita Falls, \$313,655.
Industrial Construction Corp., Ltd., Los Angeles, erection of overhead handling equipment, Aircraft Assembly Plant, Fort Worth, \$115,417.
Ordnance
***Texasteel Manufacturing Co.**, Fort Worth, forgings, \$4,940,316.
Defense Plant Corporation
***Dow Chemical Co.**, Midland, Michigan, an

authorization to provide for the construction and operation of a magnesium plant at Freeport. (On the Gulf of Mexico), approximate cost \$52,000,000.

***Gulberson Diesel Engine Company**, Dallas, an authorization to provide for the construction and equipping of a plant to be used in the production of diesel engines, Dallas, \$2,411,097.

The Southern Aircraft Corporation, Garland, an authorization to provide for the construction and equipping of a plant to be used in the manufacture of aircraft equipment, Garland, \$248,794.

VIRGINIA

Value of Total Awards June 1940
Through September 1941
Army and Navy\$710,582,000
Federal Security Administration 1,124,000
U. S. Housing Administration... 7,093,000
Public Buildings Administration 3,634,000
Works Progress Administration 5,128,000
Office of Education 1,960,000
National Youth Administration.. 1,143,000
Reconstruction Finance Corporation 7,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps
Riverside & Dan River Cotton Mills, Inc. (Factory: Riverside), 500,000 yds. cotton, uniform, twill, khaki cloth, \$204,900.
Lynchburg Hosiery Mills, Lynchburg, 250,000 prs. light wool socks, \$61,939.
Riverside & Dan River Cotton Mills, Inc. (Factory: Danville), 2,000,000 yds. cotton, herringbone, twill cloth, \$688,350.
Yards and Docks
Jeffress-Dyer, Inc., Washington, D. C., installation, Dahlgren, \$55,000.
Supplies and Accounts
M. T. Blessingham & Co., Inc., Norfolk, lumber, \$89,201.
Barrett Co., The Solvay Process Co., Hope-well, chemicals, \$80,500.
Richmond Engineering Co., Inc., Richmond, mooring buoys, \$64,386.
Air Corps
Riverside & Dan River Cotton Mills, Inc. (Factory: Danville), 1,000,000 yds. cotton, herringbone, twill cloth, \$351,500.
Reconstruction Finance Corporation
***Reynolds Metals Co.**, Richmond, plants, \$13,000,000.
***Reynolds Metals Co.**, Richmond, working capital, \$7,000,000.

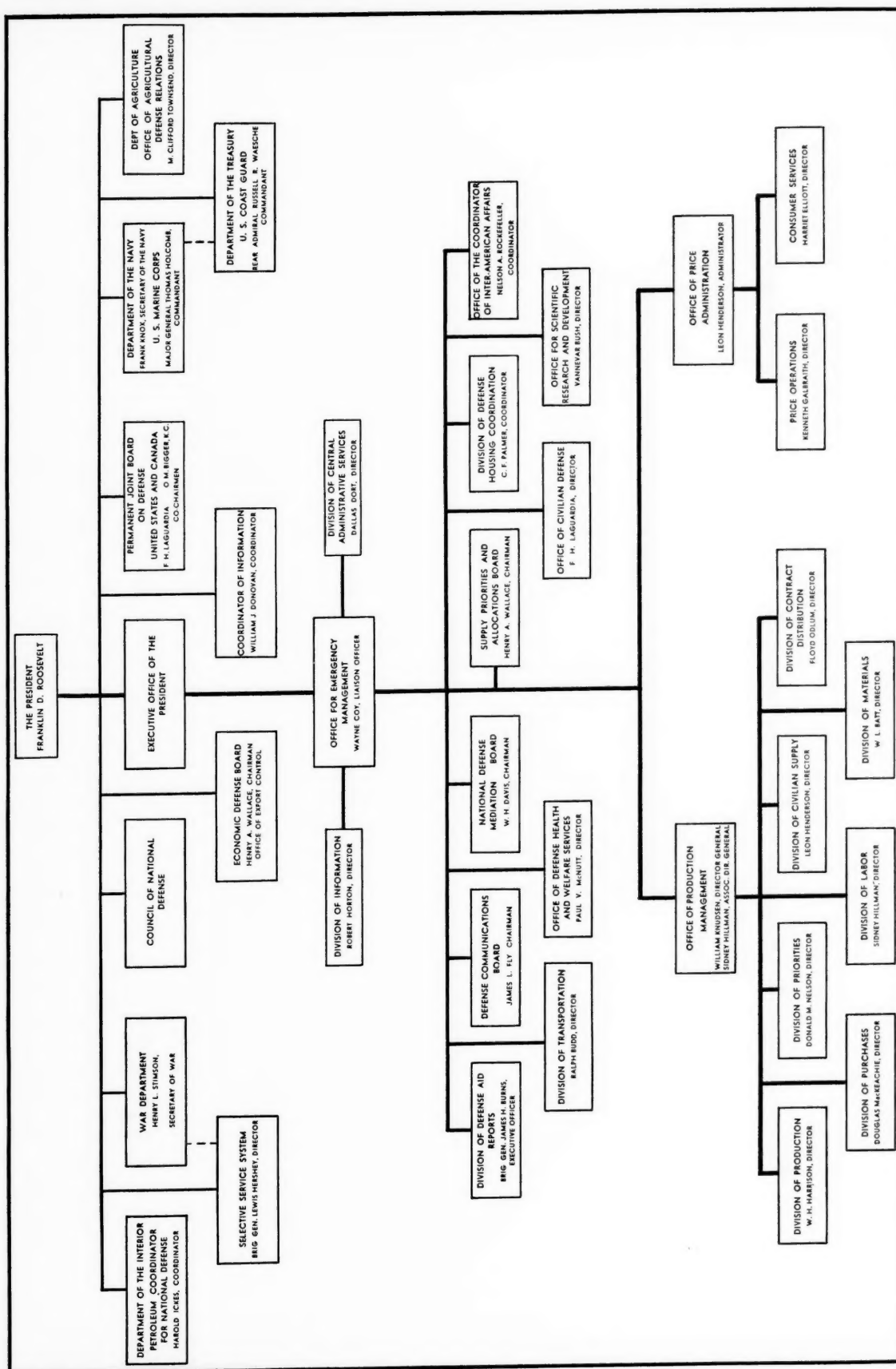
WEST VIRGINIA

Value of Total Awards June 1940
Through September 1941
Army and Navy\$124,896,000
U. S. Housing Administration... 1,364,000
Works Progress Administration 11,684,000
Office of Education 1,960,000
National Youth Administration.. 816,000
Reconstruction Finance Corporation 45,000

CONTRACTS AWARDED SEPTEMBER 1 TO SEPTEMBER 27

Quartermaster Corps
Raritan Shirt Co., Inc., Perth Amboy, N. J. (Mill: Morgan Shirt Co., Morgantown), 100,000 flannel, O. D. shirts, \$50,000.
Perry-Norvell Co., Huntington, 31,250 prs. low quarter, tan shoes, \$100,625.
J. L. Stifel & Sons, Inc., Wheeling, 200,000 yds. cotton, herringbone, twill cloth, water-repellent finish, \$90,160.
J. L. Stifel & Sons, Inc., Wheeling, 4,800,000 yds. cotton herringbone twill cloth, \$90,160.
J. L. Stifel & Sons, Inc., Wheeling, 600,000 yds. cotton herringbone twill cloth, \$210,780.
Casey Jones, Inc., Baltimore, Md. (Mill: Huntington), 100,000 cotton, khaki trousers, \$61,500.
Ordnance
***General Machinery Ordnance Corporation**, South Charleston, machining forgings, \$5,463,532.
Supplies and Accounts
The International Nickel Co., Inc., Huntington, nickel, \$50,513.
The International Nickel Co., Inc., Huntington, nickel, \$133,825.
Defense Plant Corporation
Carbide & Carbon Chemicals Corp., New York, N. Y., an authorization to provide for designs and specifications for a butadiene plant, Charleston, \$50,000.

XUM



PRIORITIES

Small Consumers of Tungsten Exempt from Reporting—Small consumers of tungsten are relieved of the burden of filing monthly reports with the Office of Production Management, in Supplementary Order M-29-a.

According to the terms of the original tungsten order, all users were required to file a monthly report as a prerequisite to receiving deliveries of tungsten. The amendment exempts from this stipulation users of tungsten in quantities of 100 pounds or less of contained tungsten a month.

Truck Production Program Extended—An extension to December 31, of the program to facilitate production of heavy motor trucks, medium trucks and truck trailers was announced recently. Although revisions of the program are under consideration, it is being extended in its present form in order to permit manufacturers to place December orders for steel immediately. Manufacturers now are cut out of all December mill schedules.

The extension also applies to production of certain passenger carriers and necessary replacement parts. It means that during the period September 1-December 31, producers may manufacture two-thirds the number of medium motor trucks, truck trailers and passenger carriers produced during the first half of the year, except that all trucks ordered for specific defense purposes, as defined in the order issued September 14, may be produced without limit.

The extension also means that manufacturers of replacement parts may produce during the September 1-December 31 period 80% of the number of parts sold for replacement purposes during the first half year.

A one-month extension also is provided for Limited Preference Rating Order P-54, which assigns an A-3 rating to materials going into heavy motor trucks (3 tons or more), medium motor trucks (1½ tons or more), truck trailers (5 tons or more), passenger carriers (motor or electric coaches with not less than 15 seats) and replacement parts as specifically listed in the September 14 order. The preference rating may be applied to purchase orders placed before December 1 and calling for deliveries prior to December 31.

The rating permits producers and their suppliers to obtain necessary materials and parts up to the maximum limitation as fixed in Limitation Order L-1-a.

Iron and Steel Scrap Under Full Control—Iron and steel scrap was placed under full priority control effective October 11.

This order, designed to relieve serious day-to-day shortages, authorizes the Director of Priorities to issue specific directions for deliveries of scrap.

The order further provides that producers, dealers and brokers, and consumers of iron and steel scrap shall make monthly reports to the Priorities Division. Beginning November 15, 1941, producers will be required to report scrap inventories, production and sales; brokers will show inventories,

purchase, and sales; and consumers must indicate inventories, production, receipts, and consumption of scrap metal.

The order emphasizes that the provisions of Priorities Regulation No. 1 apply to ferrous scrap. These provisions include prohibition of excess inventory, and stipulate that intra-company deliveries are subject to the same requirements that apply to inter-company deliveries.

Chlorinated Solvents Under Rigid Control—Preference Rating Order M-41 assigns a priority rating of A-10 to all defense orders for chlorinated solvents, which have not been granted the assistance of a higher rating; and sets up a "ladder of uses" with respect to the supply of these chemicals after defense requirements have been met.

After making provision for deliveries to fill defense orders, a producer is required, by the terms of the order, to set aside for an emergency pool 5% of each chlorinated hydrocarbon solvent produced by him each month, or 20% of the quantities, in excess of requirements for defense orders, manufactured during the month (whichever amount is smaller).

Uses for which the rating of B-2 is assigned include charging of fire extinguishers; grain fumigation; the manufacture of refrigerants; the processing and manufacturing of food, chemicals, rubber and petroleum, where substitution of other materials is impractical, and for certain other listed uses.

The preference rating of B-8 is assigned to a group of other civilian uses, including dry-cleaning; and fumigation, other than grain fumigation. The provisions of Priorities Regulation No. 1, including inventory restrictions, are applicable to the order.

New Amendment Affects Pig Iron Producers—The eight days provided for in Preference Rating Order M-17, between the filing by pig iron producers of shipment schedules, and their approval or modification by the Iron and Steel Branch, OPM, has proved an insufficient period for proper handling, and an amendment to the order has been issued. The amendment calls for the filing of reports by producers on or before the 12th of the month, and provides that their return by the Iron and Steel Branch of OPM shall be made on or before the 25th of the same month.

All Lead Placed Under Full Control—All supplies of lead, including domestic lead and imported metal, have been placed under full priority control in General Preference Order M-38, which sets up an allocation system.

All foreign pig lead now is being purchased by the Metals Reserve Company and allocated by the Lead Branch of the Office of Production Management. Purpose of this order is to extend that control to domestic lead and to formalize the action through the customary channel of the Director of Priorities.

Main points in the order are:

1. Refiners and dealers in lead must file with the Director of Priorities not

later than the 20th day of each month a schedule of proposed shipments for the following months.

2. When specified, each refiner must set aside from his production in a special pool a quantity of lead to be fixed from time to time; the lead in this special pool will be allocated directly by the Director of Priorities to meet emergency situations.

3. In shipping the balance of his production not covered by the pool, each refiner must give preference to defense orders as required by Priorities Regulation No. 1.

4. All lead released by the Metals Reserve Company will be allocated by the Director of Priorities.

Copper and Brass Under Rigid Control—Rigid controls on copper and brass, embodied in Conservation Order M-9-c, virtually forbid the use of copper for many civilian products.

In the most far-reaching action of its kind yet taken, the order sets up these controls over both domestic and imported metal and scrap:

1. Use of copper in more than a hundred civilian articles is restricted to approximately 60 per cent of a 1940 base period until January 1, 1942.

2. Use of copper in the manufacture of the articles listed is prohibited after January 1, 1942, except for non-decorative plating.

3. Use of copper in building construction is prohibited after November 1, 1941.

4. Use of copper in all items not listed is reduced to 70 per cent of a 1940 base period.

The prohibited list includes seven general categories: building supplies and hardware; house furnishings and equipment; dress accessories; jewelry, gifts and novelties; burial equipment; automotive, trailer and tractor equipment, and a miscellaneous list which runs from fire-fighting apparatus to toys.

Seven exceptions are made. Restrictions do not apply to Army, Navy, Lend-Lease or other Government defense agency contracts where the use of copper is specified; to products covered by underwriter or other safety regulations in effect on October 1, 1941; to copper used as a conductor of electricity; in chemical plants where corrosive action makes other materials impractical; in research laboratories; for condenser or heating exchanger tubes and tube sheets in steam generating plants and oil refineries where corrosive action invalidates the use of other materials, and in hydro-electric plants.

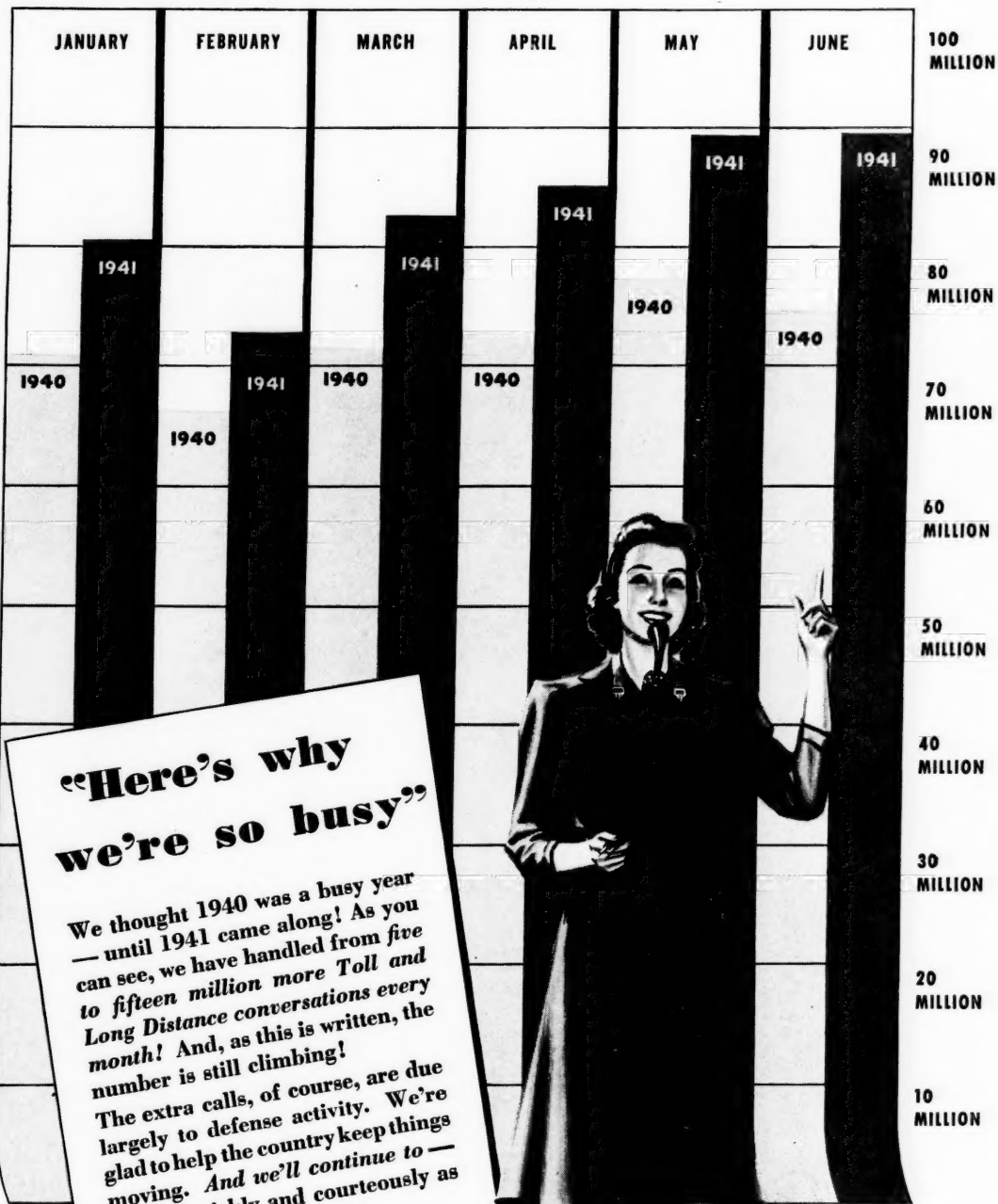
Automobile Metal Trim Curtailed—On and after December 15, 1941, the use of bright finish, bright work, metal finish, or body trim containing aluminum, copper, nickel or chrome shall be discontinued in the production of new passenger cars, except where special permission is granted for bumpers.

There shall be no further production of such bright work, effective immediately, except in amounts necessary to complete passenger automobiles scheduled to be completed before December 15.

Permission may be granted to use the restricted materials in the plating of bumpers and bumper guard assemblies, provided evidence is submitted to OPM's Division of Civilian Supply showing that

(Continued on page 62)

TOLL AND LONG DISTANCE TELEPHONE CONVERSATIONS (BELL SYSTEM)



"Here's why we're so busy"

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LONG DISTANCE
helps unite the nation



Important New Industrial Plants and Expansions in the South During October

ALABAMA

GADSEN—furnace—Republic Steel Corp., Cleveland, Ohio, let contract to Chicago Bridge Co., Birmingham, for furnace and stoves for new 800-ton blast furnace; Rust Engineering Co., Birmingham, contractor for excavation, foundations and storage bins, has started work on this contract.

LISTER HILL—plant—Reynolds Alloys Co., received contract at \$2,796,079 for additional machinery and equipment to be used in aluminum metal plant.

ARKANSAS

EL DORADO—plant—War Department approved construction of an anhydrous ammonia and an ammonium nitrate plant, located on a 3,000-acre tract near El Dorado; approximate cost \$23,000,000; owned by government; built and operated by Lion Oil Refining Co.; will provide a market for approximately 20,000,000 cu. ft. of gas per day; will be known as the Ozark Ordnance Works.

GEORGIA

BRUNSWICK—boats—Brunswick Marine Construction Co., has contract for construction of four welded steel tug boats; 100 ft. in length; powered by Diesel engines; cost \$1,000,000.

LOUISIANA

NEW ORLEANS—plant—J. G. White Engineering Corp., let contract to Boh Brothers Construction Co., for construction of two berths, including concrete, cutting off piles and excavation for concrete footings at site of shipbuilding plant being erected on the Industrial Canal for Louisiana Shipyards, Inc.

MARYLAND

BALTIMORE—plant—Defense Plant Corp. signed agreement with Koppers Co., Bartlett Hayward Division, for equipment to be used in naval equipment manufacturing plant; \$142,535; contract previously signed for construction and equipment of plant to be used in aircraft parts production; \$1,250,000.

BALTIMORE—plant—Defense Plant Corporation purchased 10-acre site in the 1600 block Wicomico St. for construction of plant to be operated for the U. S. Navy by the Tube Division of Revere Copper & Brass, Inc.; will provide tubes for condensers of steam power plants of ships; will produce approximately 400 to 900 tons of tubes monthly; contract previously let to James Stewart & Co., 230 Park Ave., New York; cost \$3,000,000.

BALTIMORE—power plant—Consolidated Gas Electric Light & Power Co. announced that General Electric Co., Schenectady, New York, will furnish generator for 2nd 67 h.p.

Contracts Awarded

unit to be installed at the Riverside Station now under construction near the Municipal Airport and scheduled to be placed in operation during the latter part of 1942; Babcock & Wilcox Co., New York, will supply boiler and Worthington Pump & Machinery Corp., Harrison, New Jersey, condensers and pumps. This 2nd Riverside unit is expected to start generating early in 1944. Its cost is put at \$5,000,000 and its completion will bring capacity of the first unit which is now under construction at a cost reported in the neighborhood of \$6,500,000, to 117,000 k.w. The Consolidated Co. in August placed the 2nd unit in operation at its Westport plant.

HAGERSTOWN—plant—Fairchild Engine & Airplane Corp., let contract to Price Construction Co., Maryland Trust Bldg., Baltimore, for additional plant facilities; approximate cost \$1,675,967; Albert Kahn, Inc., 345 New Center Bldg., Detroit, Mich., Engr.

MISSISSIPPI

PASCAGOULA—shipways—Ingalls Shipbuilding Corp. let contract to Doullut & Ewin, Inc., New Orleans, La., for two shipways to be known as sets No. 9 and No. 10.

MISSOURI

ST. LOUIS—plant—Defense Plant Corporation authorized a lease agreement with General Steel Castings Corp., Eddystone, Pa., for erection of plant to manufacture steel armor plate for tanks; cost \$14,000,000; plant adjoining Corporation's Commonwealth Division plant at Granite City; \$3,268,400 for land and buildings; \$10,731,600 for equipment; several thousand tons of tank armor will be produced monthly.

SOUTH CAROLINA

CHESTER—plant—Borden Co. let contract to McDevitt & Street Co., Charlotte, N. C., for enlarging plant; 245 x 102 ft.; will manufacture evaporated milk; approximate cost \$200,000.

TENNESSEE

CHATTANOOGA—power—Chattanooga Electric Power Board and Stone and Webster Engineering Corp., closed deal for power requirements of construction program at plant of Volunteer Ordnance Works; Stone & Webster Engineering Corp. has subcontract to erect plant; War Department let both construction and operating contract to Hercules Power Co.

COPPERHILL—oleum plant—War Department let contract to Tennessee Copper Co., New York, for conveying title to site, furnishing management services during con-

struction and at the option of the Government operating plant; subsidiary contract awarded to Leonard Construction Co., Chicago, Ill., for architect-engineering services and construction of plant; cost \$3,340,844.

TEXAS

Pipe line—Shell Pipe Line Co., W. H. Shelley, Superintendent, let contract to Permian Basin Construction Co., Odessa, for a 20-mile 6-inch pipe line from Westbrook to Cosden Refinery at Big Spring.

DALLAS—building—International Harvester Co. has permit for construction of \$221,800 branch building, 1809 South Lamar.

GARLAND—plant—U. S. Government, c/o Defense Plant Corp., Washington, D. C., let contract to Henger Construction Co., Dallas, for plant to be used for the manufacture of Diesel engines for tanks; approximate cost \$750,000; Guiberson Corp. will operate plant; Payne & Kuhn, Dallas, submitted low bid on plumbing and heating contract; J. Gordon Turnbull, Dallas, Archts. and Engrs.

WACO—factory—Owens-Illinois Glass Co., c/o General Engineering Department, Alton, Illinois, let contract to Inge Construction Co., Dallas, for erection of a modern glass container factory on company's 52-acre site on the Missouri, Kansas & Texas Railroad tracks; 1 story; steel and reinforced concrete; two wings will be 2 stories.

WEST VIRGINIA

WHEELING—plants—Defense Plant Corp. signed agreement with Continental Roll & Steel Foundry Co., East Chicago, Ind., for construction and equipment of plants at Wheeling, W. Va., and East Chicago, Ind., for the manufacture of ordnance equipment; cost \$3,283,010.

SOUTH

Plantation Pipe Lines, c/o T. C. Marshall, Atlanta, Ga., let contracts for the following booster stations: Doraville and Center, Ga., Anderson and Spartanburg, S. C., to C. M. Guest & Sons, Anderson, S. C.; Lowell and Salisbury, N. C., to Southeastern Construction Co., Charlotte, N. C.; Jersey, Tenn., to Gravier Tank & Manufacturing Co., Baton Rouge, La.

Contracts Proposed

ALABAMA

BIRMINGHAM—terminal bldg.—Shell Oil Company, Birmingham, plans erection of new terminal station; cost \$125,000; storage capacity will be 1,050,000 gallons of gasoline, 210,000 gallons of premium gasoline and 315 gallons of kerosene or fuel oil; construction work will include office, warehouse, garage and loading racks to accommodate 3 tank trucks; work will soon get under way.

MOBILE—tankers—Alabama Dry Dock & Shipbuilding Co. will build 36 new tankers (Continued on page 52)



Contract has been awarded James Stewart & Co., of New York, for constructing the \$3,100,000 tube plant shown at left. The Baltimore plant will cover three and three-quarter acres, its principal building to be 200 by 670 feet, and a smaller structure, 100 by 335 feet exclusive of a 30 by 335-foot leanto. Revere Copper and Brass, Inc., of New York, is handling the project for the Defense Plant Corporation. The plant will have a monthly capacity of 400 to 500 tons of tubes and will employ 400 men. Bethlehem Steel Co. will furnish the structural steel.

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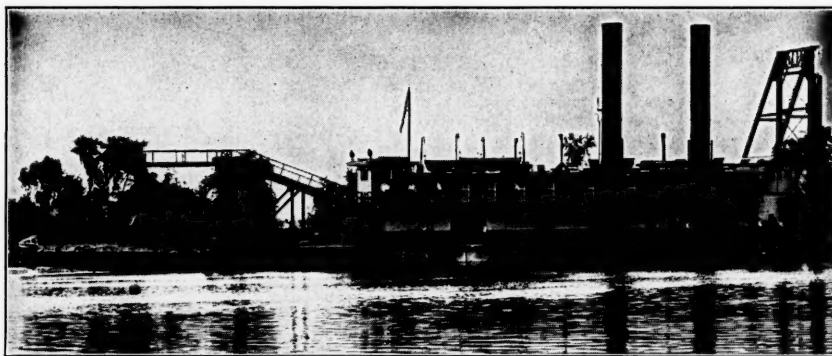
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Correspondence invited from corporate and private interests everywhere.

Contractors to the Federal Government

ATLANTIC GULF AND PACIFIC CO.
NEW YORK: 15 Park Row **HOUSTON, TEXAS: Scanlan Building**

This all steel pipe and screen shop will add 8800 sq. ft. of new manufacturing space for use in making well water screens and welded pipe for Layne & Bowler, Inc., Memphis, Tenn. This company with affiliated companies is said to have broken all time records in the number of wells installed and the amount of water produced for defense projects. Large contracts for additional Government work have necessitated increased production facilities.

New Plants and Expansions in the South

(Continued from page 50)

at cost of \$97,000,000 for U. S. Maritime Commission; 3 new shipways will be built at Mobile plant; \$97,000,000 will be cost of ships.

ARKANSAS

Plant—Carter Oil Co., J. R. McWilliams, production manager, Tulsa, Okla., and Atlantic Oil Co., Todd & Ralph Davidson, production superintendent, Magnolia, considering erection of desulphurization plant for sour gas produced in McKame field of Lafayette County; definite site not decided.

EL DORADO—chemical plant—Lion Chemical Corp. incorporated in Delaware to operate government's proposed \$23,000,000 anhydrous ammonia and ammonium nitrate plant to be built near El Dorado; T. M. Martin of Lion Oil Refining Co., will be vice president of new company; will be known as Ozark Ordnance Works; plant may be located at Callon.

PINE BLUFF—plant—War Department authorized Chemical Warfare Service to proceed with plans for erection of incendiary bomb plant at estimated cost of \$36,000,000; has site of 5,000 acres in Jefferson County, northwest of Pine Bluff; will erect many buildings to house manufacturing and assembly plants, chemical warfare and storage depots, laboratories, shops, offices, hospital, fire and police departments, communications facilities and utilities including highways and railroads; a total of 1,000,000 square feet of floor space will be required for completed plant; War Department has allocated \$10,000,000 for land needs and immediate construction of the arsenal; estimated output 3,000,000 bombs a month; buildings will be of reinforced concrete with tile roofing; will be government owned and agent-operated.

SILVAM SPRINGS—plant—The Pet Milk Company purchased site for erection of plant for the manufacture of evaporated milk; approximate cost \$500,000.

DISTRICT OF COLUMBIA

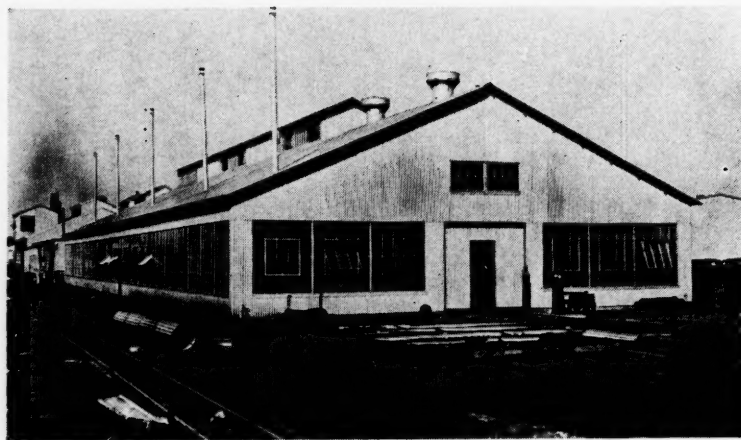
WASHINGTON—plant—Stewart Brothers, 1012 5th, N. W., plan fuel oil plant, 1330 Virginia Ave., S. E.; 1-story; brick and cinder block; cost \$100,000; Leon Chatelain, Jr., Transportation Bldg., Archt.

FLORIDA

CLEWISTON—plant—The Government has granted priority on materials and equipment for construction of a sweet potato starch plant to be erected by the United States Sugar Corp.; approximate cost \$3,000,000.

JACKSONVILLE—repair work—Merrill-Stevens Drydock Company and Gibbs Engine Company received tentative allotment of \$3,500,000 for ship repair facilities.

PENSACOLA—power unit—Securities and Exchange Commission approved application of Gulf Power Co. to issue \$6,500,000 in new bonds, due 1971, which will pay for construction of a 20,000-k.w. steam plant near Pensacola; final site for steam plant to be fuelled by natural gas has not been selected; estimated cost \$2,500,000; other projects included in the construction program are transmission line from Graceville to Panama City via Marianna with substations at Marianna and Panama City; at Marianna transmission will link Gulf Power to the



Florida and Alabama Power Companies; transmission line, substation and other equipment will be extended in the Pensacola-Milton-Crestview area; transmission line and incidental equipment will provide connection between Graceville and Crestview; approximately \$3,100,000 will be expended for construction program during the years of 1941 to 1943 inclusive.

TAMPA—ways—Tampa Shipbuilding Company, Inc., received low bid of \$209,700 from E. S. Moore & Son, St. Petersburg, for construction of No. 4 ways.

GEORGIA

SAVANNAH—expansion—Union Bag & Paper Corp., Alexander Calder, president, plans \$4,600,000 expansion to plant; will add 234-inch paper machine and supplemental equipment; increase daily output from 692 to 1,000 tons of Kraft board paper and bags; increase facilities of plant by over 1,000,000 additional ft. of floor space; construction of new club house and restaurant.

SAVANNAH—ship contract—Savannah shipyards, Inc., has been awarded a contract by U. S. Maritime Commission to construct 12 ships, as part of a program calling for 566 merchant vessels; ships will cost approximately \$1,500,000 each; 3 additional ways to be used for the ships are now under construction as are the mold loft and auxiliary shops; Herbert Boxmeyer, Construction Engr.

VIDALIA—plant—Gum Turpentine Farmers' Cooperative Association, W. C. Rice, naval store operator, plans \$60,000 plant; capacity of 65,000 barrels of crude gum.

KENTUCKY

Generator—Kentucky & West Virginia Power Co. has applied to Public Service Commission for permission to construct an additional 35,000 k.w. unit to be installed in generating plant near Hazard; estimated cost \$4,000,000.

ASHLAND—plant—Defense Plant Corporation authorized execution of a lease agreement with American Rolling Mill Co., Middletown, Ohio, to provide \$842,000 facilities to be used in production of synthetic scrap; plant will have annual capacity of 600,000 tons; another agreement made to provide \$584,000 facilities for production of steel ingots; plant will have annual capacity of 43,200 tons.

LEXINGTON—plant—Kentucky Electric Generating Co. incorporated as subsidiary of the Kentucky Utilities, by D. L. Street, Louisville, and others, to construct 25,000 k.w. steam electric plant at Tyrone; grading and road building are under way.

LOUISVILLE—expansion—Defense Plant Corp., authorized an increase of \$279,419 to its present agreement of \$2,920,580 with Reynolds Metals Co. for additional facilities used in production of extruded products.

LOUISIANA

BATON ROUGE—expansion—Solvay Process Co., 61 Broadway, New York, will shortly commence work on an expansion of its soda ash plant, according to an an-

nouncement made by G. A. Milligan, vice president, who pointed out that the work will be in addition to that proceeding for the past several months at the company's Detroit plant.

BATON ROUGE—addition—Gulf States Utilities Co., H. C. Leonard, Vice President, will begin construction in November on a 25,000 k.w. addition to power plant at estimated cost of \$2,300,000; will raise plant's steam production 500,000 lbs. hourly to a total of 3,300,000 lbs.; present power capacity of plant is 88,500 k.w. which will be expanded to 108,500 k.w.

NORTH BATON ROUGE—acid plant—Ethyl Gasoline Corp.'s present chlorine plant, operated by R. & H. Chemicals Department of E. I. du Pont de Nemours, will break ground for new hydrochloric acid plant at once, construction will include installation of four Mannheim furnaces; other facilities, some of which will not be completed until the end of next year, are a gas-engine steam compressor building, improvements to steel stacks and to the refrigeration system, and additions to research laboratories; machinery to liquefy all chlorine produced will be installed on rush orders, to be completed by the time the hydrochloric acid plant is ready to supply the needs of tetraethyl lead manufacture; capacity of chlorine plant will be increased by the addition of new wing, expected to go into operation next Spring; expansion of the manufacturing plants at North Baton Rouge estimated at cost of \$2,500,000; over 1,000,000 cu. ft. of chlorine gas will be available.

BATON ROUGE—expansions—Governor Jones approved the applications for industrial tax exemptions, filed by the Louisiana division of Consolidated Chemical Industries, Inc., for the expenditure of \$560,000 for chemical plant expansions; includes new sulphuric acid plant and additions to existing plant.

MARYLAND

BALTIMORE—alterations—Davis Construction Co., 9 W. Chase St. and Leimbach & Williams, Inc., 30 W. Biddle St., additional prospective estimators, bids received October 28 by American Hammered Piston Ring Division, Koppers Co., for alterations and additions to building, Bush and Hamburg Sts.; cost \$200,000; Robert N. Gibson, c/o owner, Engr.

FAIRFIELD STA., BALTIMORE—expansion program—Maryland Dry Dock Co., Fairfield, has started \$5,000,000 expansion program providing additional facilities to meet needs of national defense; will increase repair plant's productive capacity by more than fifty per cent; approximately 500,000 cu. yds. dredging will be involved in providing a basin for dry dock; in providing adequate depth of water alongside the marginal wharf, and in deepening approach channels; purchase and installation of machine tools and various types of equipment in various new shops will be purchased; nine additional buildings are to be erected

(Continued on page 64)

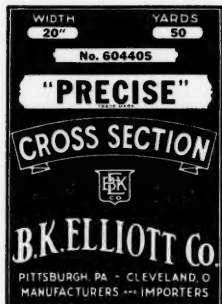
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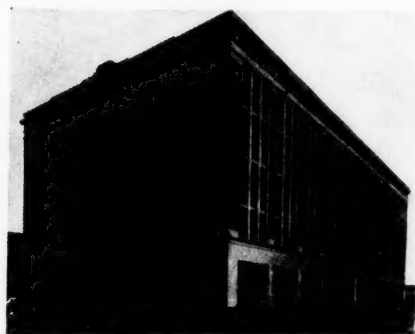
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Near center of business section of Charlotte. 100 ft. by 200 ft., five stories high. Concrete construction. Fireproof throughout. Sprinkler system, heating, elevator, etc. Flat concrete roof suitable for auto parking. 6000 ft. display room on first floor.



Inquiries invited for lease of entire building to one tenant, or one or more floors to a tenant.

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Charlotte, N. C.**

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**We make mortgage loans in amounts
from \$100,000 to \$1,000,000 on fac-
tory properties.**

Good earning record required, with at
least 40% of output for defense purposes.
(Manufacturers of food products do not
come under this defense restriction).

COMMUNICATE WITH

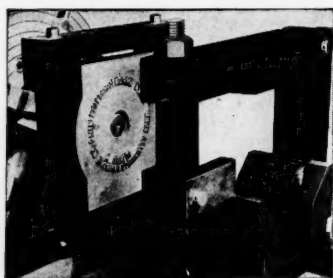
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INCORPORATED

Munsey Building, Baltimore, Md.

For Stamping Base of Finished Shells

A stamping machine for marking details on base of finished shells that can be fitted into any production line with the minimum of setting up cost is the Shell Marking Machine No. 2 made by M. E. Cunningham Company, 115-117 East Carson Street, Pittsburgh, Pennsylvania. Because of its simple design this equipment can be furnished as a complete motor driven unit or as a fixture for setting up on an ordinary lathe.



Shell Marking Machine No. 2

The complete motor driven machine is constructed with a rotating head similar to a lathe with drive coming direct from a specially set up motor. The shell is held securely in place by means of steel clamp and pressure to force shell against type is gained through a tail stock attachment.

The attachment for the lathe is similar to the complete unit except that the stamping and clamp fixture is set-up on the bed of the lathe and the rotating head is fitted into the lathe chuck.

This machine can be made for any size shell and the type holder can be made for any required set-up.

New Variable Speed Control

A new V belt variable speed transmission known as the JFS-CUB is the product of Standard Transmission Equipment Company, 416 W. 8th Street, Los Angeles, California.

The JFS-CUB is especially designed for all "A" section V belt applications and for speed ranges up to 3.3-1. Smooth sided pulleys are used rather than the interlocking type. Among the advantages claimed are: the patented positive belt alignment feature which makes possible the mounting of the CUB in any and every position without impairing function or throwing belts out of alignment; forced lubrication of the bronze bearings on which the pulleys rotate; free-end pulley spindle to permit easy installation of belts; both pulleys on one side of pivotal mechanism which permits motor pulley and driven pulley to be almost directly in line with each other. The CUB will transmit full capacity of "A" section V belts, and can be used with all machines now using that size.

New Babbitt Metal For Bearings

A new babbitt metal for bearings subject to high pressures and temperatures

New Methods and Equipment

has been developed by Magnolia Metal Company, Dept. 20, 120 Bayway, Elizabeth, N. J. This metal, known as Power Nickel Genuine Babbitt, has a tensile strength of 17,500 lb. per sq. in., a yield point of 6,500 lb. per sq. in., a Brinnell hardness of 27, and its pouring temperature ranges from 950 to 1,000 deg. Fahr. The high softening and melting temperatures make the metal resistant to extreme local heat. Its unusual strength makes the metal adapted to very heavy bearing loads, such as are encountered in railroad service, heavy rolling mill machinery, and paper mill machinery. The nickel treatment gives the metal a hard glossy surface, desirable for generators, motors and other high speed application.

New Locomotive For Industrial and Switching Use

A new 65 ton, double power plant locomotive for general industrial and switching use is announced by the H. K. Porter Co., Inc., 4995 Harrison St., Pittsburgh, Pa. Powered with two Cummins Super-



The new 65-ton Porter industrial locomotive

charged diesel engines developing 200 H. P. each, the locomotive has a tractive force of 39,000 lbs. at 30% adhesion. Overall size is 12 ft. high by 9 ft. 6 in. wide by 33 ft. long, from bumper to bumper. Total weight, in working order, is 130,000 lbs. The locomotive is built for both standard and 36 inch gauge track.

Each engine is fitted with fuel distributor, forced feed lubrication, centrifugal cooling pump and 32-volt automotive type starting motor with 350 volt generator. Radiators, engines and generators are mounted on bedplate of heavy steel construction. Center sills are made from 12 in. I beams weighing 55 lbs. per foot, and side sills are of 12 in. channels weighing 40 lbs. per foot. Bumpers are of heavy solid steel slabs.

Eight drive wheels are arranged on two 4-wheel trucks, each equipped with two high speed generators and four high speed motors. Each axle is driven by one motor with reduction gears. The cab is constructed of sheet steel with windows at front, sides and rear. Shatter-proof glass windows are secured by rubber glazing to prevent breakage.

New A-C Arc Welder

A new A-C arc welder suitable for all types of industrial services is designed to give, in 30 different steps, practically any welding current required between 15 and 250 amperes. The low heat ranges make it possible to weld very light gauge metal without danger of burning holes, while the high heats permit the welding of heavy parts.

The welder has passed the 8-hour Burn-Out Test of the National Board of Fire Underwriters. This test is made with transformer short circuited and machine in continuous operation for 8 hours at the maximum 250 amp. rate.

Standard equipment with this unit includes 20 ft. of A-C cable, 20 ft. of ground cable, 20 ft. of electrode cable, and one electrode holder.

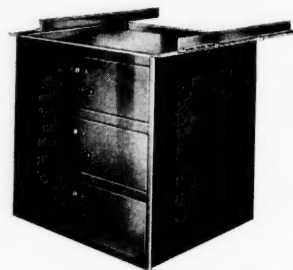
The manufacturer is Allen Electric & Equipment Company, 1044 N. Pitcher Street, Kalamazoo, Michigan.

A New Valve Seat Grinder

A re-seating tool for steam, water and air valves, known as Pivot Valve Seat Grinder, is furnished in sets including all sizes from 1/2 inch to 3 inch, inclusive, by Pivot Tool Company, Homewood Station, Birmingham, Alabama. The Pivot tools are primarily furnished to regrind Globe, Angle and Check valves of the flat and oval seat type but they will fit many other types and, in addition to grinding, they remove old disc residue, scale, and seat defects as well as cleaning and polishing.

New Welding Benches and Accessories

Two new welding benches have been developed by Lyon Metal Products, Inc., for use in vocational machine shops, garages, and the like. One bench is specifically designed for gas welding with a frame built to support a fire brick top thirty-four inches from the floor. The other is for arc welding and has a thirty-five inch high shield on the back and sides of a smooth steel working top thirty-three inches from the floor. Both benches are equipped with separators for welding rods and additional space for storage.



Storage Unit for Different Shifts on the Same Machine.

The accompanying illustration shows the new Lyon two and three drawer storage unit which enables workers on two or three different shifts to store their tools or personal effects separately yet conveniently. Additional information concerning these items may be obtained from Lyon Metal Products, Inc., 3064 Clark St., Aurora, Ill., by requesting catalogue 331-D.

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SHORT CUT to FACTS

Everyone knows the South possesses outstanding advantages for manufacturing. However, not all communities in the South offer equal advantages to industry. In the six Southeastern States served by the Seaboard, as elsewhere, a plant location is good or bad depending upon whether it meets the requirements of the enterprise.

WE KNOW THE GOOD PLANT LOCATIONS

For many years we have made a careful study of this territory, and accumulated a great amount of information on plant sites, natural resources and manufacturing conditions. To responsible clients we offer an experienced and competent plant location service without cost or obligation.

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Natural gas has created the possibility of effortless comfort by the facility, and economy with which it fits into the home.

SOUTHERN NATURAL GAS COMPANY

Watts Building

Birmingham, Ala.

Industrial News

Bailey Meter Company Appoints New Branch Manager

Bailey Meter Company, Cleveland, announces the appointment of R. M. Cundiff as manager of its Cincinnati Branch Office at 2512 Carew Tower Building. He succeeds E. R. Dearborn, who has resigned. Mr. Cundiff who is a mechanical engineering graduate at the University of Kentucky and a native of that state has for the past twelve years been located in the company's New York Branch Office. He will be assisted by J. A. Lucas and J. E. Zimmerman, both mechanical engineering graduates especially trained in methods of improving boiler plant operation through the application of meters and automatic control.

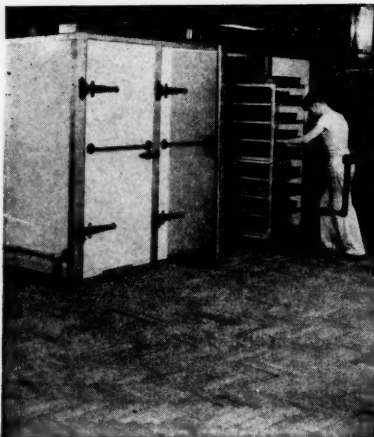
Vari-Typer Company Appointment

W. L. Calhoun of Atlanta, Georgia, who has

been associated with the Vari-Typer Company in a sales capacity since 1939, has been appointed Southeastern District Supervisor. Mr. Calhoun will continue to make his headquarters in Atlanta, Ga. (211 Bona-Allen Bldg.). As Southeastern District Supervisor, he will direct sales in the territory which includes Georgia, Florida, Alabama, Louisiana, Mississippi and part of South Carolina and Tennessee.

Cochrane Corp., Appoints Charlotte Representative

W. B. Simons, Charlotte, N. C., has been appointed representative for Cochrane flow meters in the Carolinas, according to announcement from Cochrane Corporation, Philadelphia. Mr. Simons also handles the products of Hays Corporation, Spence Engineering, Cuno Engineering, Williams Gauge, and the Henszey Company.



Maple's easy on workers and "long" on work—because it's less fatiguing and much more comfortable.

Being wood, it's warm underfoot, dry and resilient—prevents loss of body warmth through conduction. And so smooth, it's traffic-fast—helps men and equipment move swiftly and easily—conserves energy to step up production.

But there's nothing "sissy" about Maple. It

takes abuse with any floor—keeps its smoothness under the pounding of trucks, in heaviest-duty plants. It's easy to clean, easy to maintain, usually costs less in the long run.

Now more than ever, industry needs Hard Maple. Ask your architect about MFMA Northern Hard Maple, in strips or blocks.

MAPLE FLOORING MANUFACTURERS ASSOCIATION

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Floor with MFMA Maple

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many businesses that have brought us their financial problems.

Correspondence invited.

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Member Federal Reserve System
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Men Work BETTER

on

Maple Floors

Koppers Company Change

Robert M. Gibson has been transferred from Koppers Company, Bartlett Hayward Division, to Koppers Company, American Hammered Piston Ring Division, Baltimore, as engineer engaged in design and construction. Mr. Gibson became connected with the blast furnace and steel plant industry after serving in the A. E. F. during the World War. He joined Koppers Company in 1923, was assistant district engineer in the New York office and later assistant superintendent of maintenance for the Seaboard division. Since 1937 he was sales engineer of equipment for blast furnace, steel plant and process industries for the Bartlett Hayward division.

Changes in Norton Sales Organization

Announcement of changes in the Norton sales organization include: J. E. Strachan, Jr., of the Cincinnati territory has been assigned to the Pacific Northwest which includes the states of Washington, Oregon, Idaho, Montana and Wyoming where he replaces A. M. Pitts who resigned on October 1; S. F. Prescott of the Worcester sales engineering department becomes salesman for the Cincinnati territory; J. P. Knight, formerly of the Chicago office staff, becomes field engineer for the Chicago district; and Wendell C. Forsman of the sales engineering department at Worcester has been appointed field engineer for Detroit and vicinity.

Fairmont Plant Now Producing Fluorescent Lamps

Production of fluorescent lamps is now well under way in the \$3,000,000 Westinghouse works at Fairmont, W. Va. Hundreds of people are already on the job where ultimately 1,000 people will be employed.

To produce this new type lamp at the rate of 100 per minute, the Westinghouse plant was designed for maximum efficiency and a safe, comfortable manufacturing environment. Windowless construction with complete air conditioning was adopted because dust free air is particularly important in the manufacture of fluorescent lamps. Air entering the plant is freed of dust by Precipitrons and purified by banks of Sterilamps. Controlled, daylight illumination without glare is provided by 5100 fluorescent units throughout the plant.

To meet the increased demand for fluorescent lamps, it was necessary to enlarge Westinghouse lamp production on quick notice. Fairmont was chosen for the plant site, because it has the vital supply of fuel gas, electric power, water service, and an adequate supply of labor suited to lamp manufacture.

Johns-Manville Elects New Vice President

John A. O'Brien has been elected vice president of Johns-Manville Sales Corporation. Mr. O'Brien will continue his duties as general sales manager of the power products and industrial department, a post he has held since 1938. He is a member of the J-M Quarter Century Club, having begun his career with the company in 1915, and is a member of the Engineers Club, New York.

Harvester to Make Anti-Tank Gun Carriages

Carriages for a medium caliber anti-tank gun will be manufactured at the Milwaukee Works of the International Harvester Company under an order totaling approximately \$2,500,000. The Harvester Company will be responsible for the manufacture of the complete carriage for the gun except for the

FOREST CITY, N. C.

Wants manufacturers to know the advantages of locating here. The best schools, churches, transportation, health, water, living and labor conditions. Concessions given.

George R. Moore, Union Trust Bldg., Forest City, N. C.

ELBERTON, GEORGIA (1940 population 6,187)

seat of

ELBERT COUNTY (1940 population 19,622)

To new industries City and County taxes are waived for five years. Ample rail, motor truck and passenger bus transportation. Ideal climate.

Elberton needs a garment factory employing between 150 and 200 white women.

Address, Chamber of Commerce, Elberton, Ga.

MANUFACTURERS RECORD FOR

armor plate, and will install the armor plate on the carriage. The recoil mechanism and gun barrel will be manufactured elsewhere, and the final assembly of the gun also will be made elsewhere. In order to expedite production, the company will subcontract various parts of the carriage. The carriages, which will weigh approximately 1,600 pounds, will be built in a little more than a year from the time the full production rate is reached by the plant. The company has received an additional order for approximately \$300,000 for further high speeding of 155-mm gun carriages. The Milwaukee plant is now in the process of filling a \$1,000,000 order for the high speeding of such carriages.

Trade Literature

CENTRIFUGAL PUMPS AND ANGLE ENGINE-COMPRESSOR

Bulletins V-1400-M15, W-304-B2, and S-550-B19—issued by Worthington. The first of these outlines the savings possible by underbelting. The second describes the construction and specifications of U-type, two-stage centrifugal pumps. The third shows angle engine-compressors, with the various installations for which they are adapted. **Worthington Pump and Machinery Corp., Harrison, N. J.**

"BANK MANAGEMENT CONTROLS"

Book—consisting of a series of Articles which appeared in **Bankers Monthly**. Not only does it detail the general mechanics of setting up a bank control system, but it takes up the specific control procedure for every function and every department. This book is designed both for the bank having no system of control and as a yardstick for those banks where controls have already been set up. This book may be obtained for \$5.00 from **Rand McNally & Co., Bank Publications Division, Chicago, Ill.**

CONVEYORS

Book—No. 1975, introducing Link-Belt's Bulk-Flo, the new method of conveying granular, ground, crushed, or pulverized material. Chief attention is paid to design and operating advantages of this new conveyor, and there are numerous photographs of installations. **Link-Belt Co., Indianapolis, Ind.**

REFRACTORY INSULATING CONCRETE

Booklet—"Lumnite" describes the properties of Refractory Insulating Concrete and gives detailed information on mixing and placing this cold-setting, monolithic refractory material. For these special types of Refractory Concrete light-weight insulating aggregates are used. A calcium-aluminate cement, LUMNITE, is employed as the binder. The booklet stresses the availability of materials and the adaptability of Refractory Insulating Concrete for industrial furnace construction. Six legible charts give hot- and cold-face temperatures and heat loss for different thicknesses of several types of furnace walls at operating temperatures from 250° F. to 2500° F. **Atlas LUMNITE Cement Company, 135 East 42nd St., New York City.**

BOOK REVIEW

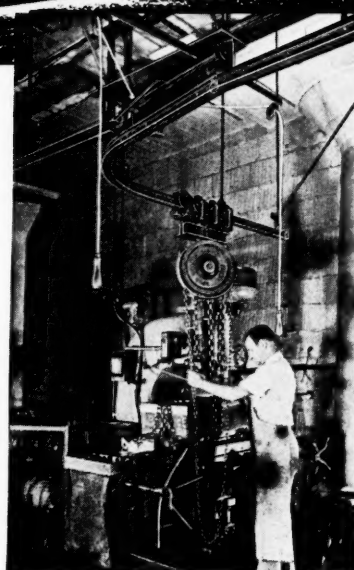
The Final 1941 Edition of Rand McNally Bankers Directory shows that the 15,134 banks of the United States have increased their commercial loans and discounts by \$1,577,283,000 since December 30, 1940. This increase is \$74,723,000 more than the comparable gain during the last six months of 1940. The current figure of \$25,577,515,000 is the highest since June, 1932. This new edition of the Blue Book breaks down every bank's latest statement into 11 columns for easy reference and comparison. Each bank's personnel, directors, and correspondents are listed, and FDIC memberships indicated. The location and personnel of all government banking agencies are shown. Other regular features, upon which bankers have come to rely, include the officers of all bank associations, the nearest banking point to over 72,000 non-bank towns, a five-year list of discontinued bank titles, a selected list of investment dealers, and a list of commercial banks with total resources of \$25,000,000 and over. A list of attorneys covering every county in the U. S., as well as the Provinces of Canada and principal foreign cities accompanies the Blue Book. Complete data is included on all foreign banks. Particular attention has been given to the banking institutions of Central and South America. This edition (2,574 pages) contains 73 maps. Cloth bound, \$15 a copy delivered.



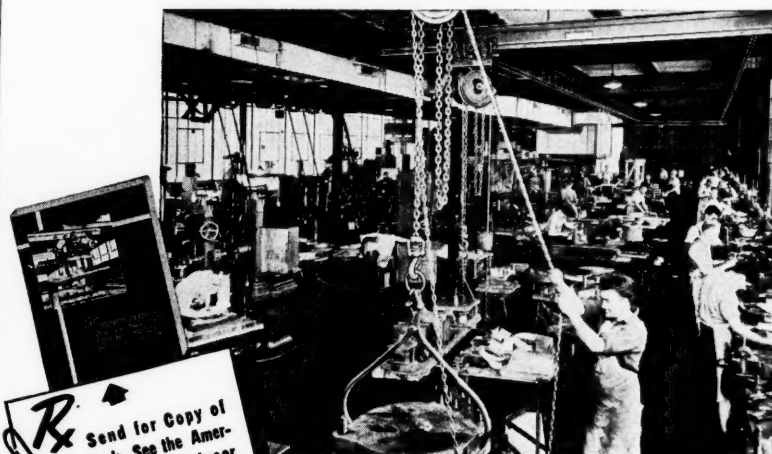
"HIGH re-handling costs through process"—"Production tied up by floor congestion"—"Too much handling by skilled labor"—these and many other "production jitters" are being easily and quickly "cured."

The American MonoRail Engineer has the right prescription for putting production on an efficient basis.

Whatever your handling problem may be, it will pay you to talk with an American MonoRail Engineer. He will explain the benefits of American MonoRail Overhead Handling Equipment particularly suited to your individual problem.

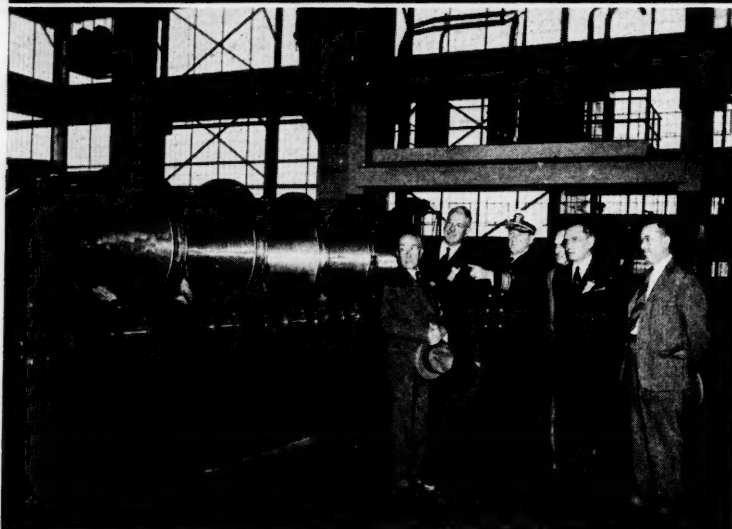
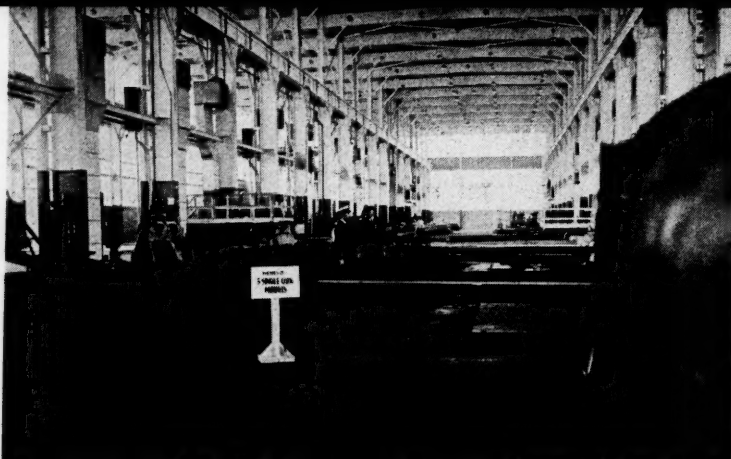


Spur track over milling machine helps operator set heavy die block.



Fast moving cranes serve entire area in tool and die shop.

THE AMERICAN MONORAIL CO.
13118 ATHENS AVENUE CLEVELAND, OHIO



[U. S. Navy Photo]

The new Naval Ordnance Works plant at Louisville, Ky., operated by Westinghouse Electric and Manufacturing Company, was recently completed and put in operation. Above—View of the assembly plant showing naval ordnance under construction. Below—Rear Admiral W. H. P. Blaandy, Chief of the Bureau of Ordnance, U. S. Navy, with others inspecting torpedo tubes being manufactured in the Kentucky plant.

More Ship Ways

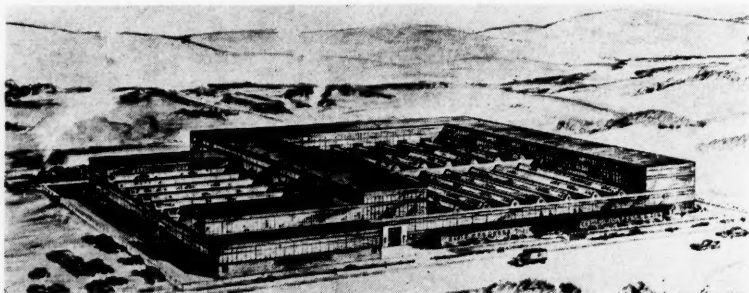
Daily Construction Bulletin reports that the Maritime Commission has recently closed contracts for additional merchant shipbuilding facilities involving expenditures of approximately \$15,000,000 with five existing shipyards. Contracts provide for construction of 18 additional shipways and two outfitting piers as follows: Alabama Dry Dock & Shipbuilding Co., Mobile, 8 ways; Louisiana Shipyards, Inc., New Orleans, 2 ways; Ingalls Shipbuilding Corporation, Pascagoula, Miss., 3 ways; the remaining ways are to be located at Richmond, Calif., and South Portland, Me.

All of the above are part of the Commission's emergency and defense aid expansion program, which provides for the addition of 131 ways to those existent the first of the year in the country's shipyards participating in the construction of approximately 1200 merchant ships between now and the end of 1943.

Of the 131 additional ways, 83 have been completed and 48 are in varying stages of construction. It is expected that practically all will be in operation by the end of this year building ocean-going dry-cargo vessels and tankers.

Engineering Curricula Approved

The Engineers' Council for Professional Development, comprises national societies of civil, mining, mechanical, electrical and chemical engineers. A recent announcement states that following an inspection program of its committee on engineering schools, a total of 461 engineering curricula at 129 colleges and universities in the continental United States have now been accredited. Provisional accrediting has been given 104 additional curricula.



Total Sales of \$2,900,000,-000 by Large Steel Firms in 1940

The Securities and Exchange Commission reported in October that the nation's ten largest steel producers did last year a business amounting to \$2,930,000,000. This was nearly \$700,000,000 more than in 1939.

The survey covered only American steel companies with assets of more than \$100,000,000 each. Twelve companies were included with aggregate assets of \$4,304,782,000, and net income after all charges of \$242,170,000. Provisions for taxes in 1940 amounted to \$86,653,000, compared with \$29,535,000 in 1939.

Fairbanks, Morse & Company To Build New Diesel Engine Plant

Colonel Robert H. Morse, President and General Manager of Fairbanks, Morse & Company, announces that a "letter of intent" has been issued by Secretary of the Navy, Frank Knox, authorizing the expenditure of \$5,500,000 for a new building and additional equipment and machinery at the Beloit, Wisconsin, works of the company.

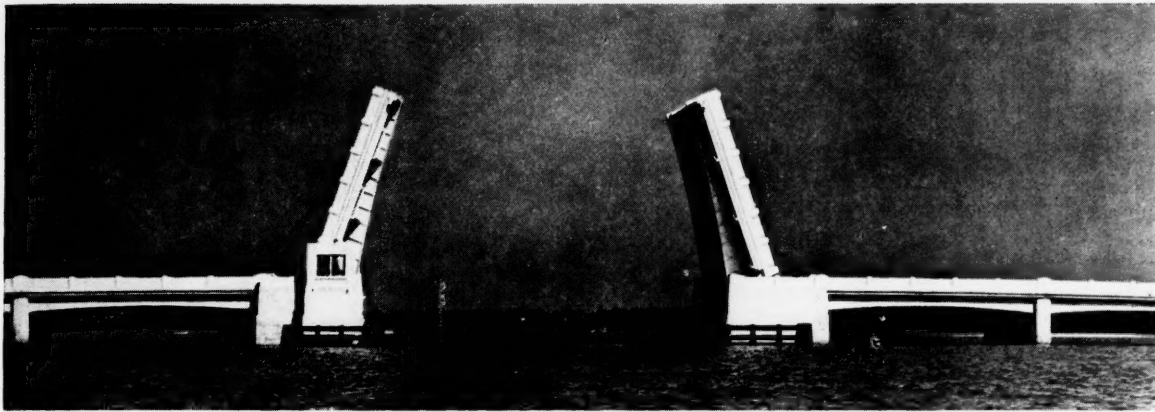
The purpose is to triple the production of Fairbanks-Morse Diesel engines for the United States Navy—engines which at the present time are providing both propulsion and auxiliary power for U. S. Navy submarines, cruisers, destroyers, aircraft carriers and other sea power.

The terms of agreement call for completion of the plant, including installation of machinery and equipment and large scale production of Marine Diesels, in about a year's time.

The project will mean additional employment of at least 1,200 to 1,500 factory workers. The present payroll at the Beloit plant approximates 4,500 men.

The new plant will have a floor space of more than 300,000 square feet; will contain a large machine shop, welding shop, storage facilities for raw and processed materials, assembly floor, erecting floor, test floor, painting and shipping departments, first aid hospital, conference rooms and offices, besides provision for production and planning departments and engineers.

The structure is to be of concrete, brick and steel. Its design and arrangement will conform to the latest engineering practices. Below is an architect's perspective of the plant.



Electric Arc Welded Double Leaf Bascule Bridge

Central Avenue between St. Petersburg and Treasure Island Beach, Florida

BETTER CONSTRUCTION AT LOWER COST

THE AETNA STEEL CONSTRUCTION COMPANY
JACKSONVILLE, FLORIDA

BELMONT IRON WORKS

PHILADELPHIA NEW YORK EDDYSTONE

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Engineers . Contractors . Exporters

STRUCTURAL STEEL
BUILDINGS AND BRIDGES
RIVETED-ARC WELDED
BELMONT INTERLOCKING
CHANNEL FLOOR

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Wood Preservers Since 1878

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**POLES • CROSS ARMS • PILING • TIES
POSTS, BRIDGE AND DOCK TIMBERS**

Treating Plants—JACKSONVILLE, FLA. • LONG ISLAND CITY, N. Y.

Filtration and Pumping Equipment

*For Water Works and Swimming Pools
Sales and Installation*

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Bristol Steel & Iron Works, Inc. STRUCTURAL STEEL

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CRUSHED STONE

Only highest grades of crushed
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Meeting all specifications

CAPACITY—8000 tons daily

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W. W. BOXLEY & COMPANY
Boxley Building, ROANOKE, VA.

B. Mifflin Hood Co.

**Chemical
Stoneware:**

ALL TYPES
CHEMICAL BRICK
AND SHAPES.

SPIRAL RINGS,
DIAPHRAGM &
RASCHIG RINGS.

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**Quarry
Tile:**

ALL TYPES
QUARRY FLOOR
& WALL TILE.

ROOF TILE
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FACE BRICK.

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DAISY, TENN.
CHARLOTTE, N. C.



West Virginia manufacturers of glass, china, pottery and other ceramic products joined with the Upper Monongahela Valley Association in an exhibit at the annual Mountain State Festival at Elkins, W. Va., last month. Above is one corner of the exhibit hall showing a number of the displays.

Norfolk Offers Inducement to Out-of-Town Builders to Help Supply New Homes

Editor, MANUFACTURERS RECORD:

Norfolk, Virginia, is getting a lot of unfavorable publicity because of the acute house shortage here.

The local builders have built 2,900 houses in the last year trying to help house the influx of defense workers to Norfolk, but it is out of the question for local builders and developers to build them fast enough to keep up as Norfolk's population has increased from 119,000 to 222,000 in two years.

A few wealthy patriotic public spirited citizens have purchased 5,000 lots to give to any out-of-town builders that will build in groups of 50 or more homes at a time and help Norfolk get the 10,000 new homes we have promised the Navy Department we would build during the next six months. We figure that local builders can build 5,000 and by giving absolutely free 5,000 lots to out-of-town builders that we can get enough out-of-town builders to build the other 5,000 so we can keep our word to the Navy and get the 10,000 new homes to house the defense workers and stop the unfavorable publicity Norfolk is now getting.

When the Navy recently started building two new ship yards, we promised the 10,000 new homes with the aid of F.H.A. and we want the public to know that Norfolk is doing everything possible to keep our word.

W. B. SHAFER, JR., Chairman
Emergency Housing Committee
Norfolk, Virginia.

Clinic on Conservation of Materials

A special feature of the 1941 annual meeting of The American Society of Mechanical Engineers, at the Hotel Astor, New York, December 2, will be a Clinic on the Conservation and Reclamation of Materials used in Industry.

5-Year Shipbuilding Record of Maritime Commission

H. Gerrish Smith, President, National Council of American Shipbuilders, addressing the American Merchant Marine Conference at San Francisco last month, referred to the four years of commercial shipbuilding in the United States under the provisions of the Merchant Marine Act of 1936 and subsequent Acts, starting with the contract for the S. S. America in October 1937. He said that this was "the largest merchant shipbuilding program ever undertaken in the world with the single exception of the first World War program in this country. Taking into account, however, the additional merchant vessels projected and the naval vessels now under construction or projected, the present program even exceeds that of the World War period. . . . On October 1 of this year, there were under construction in the private shipyards of the United States approximately 775 seagoing merchant vessels and 503 combatant naval vessels. . . . The grand total of unfinished contracts . . . is equivalent to 21,400,000 dead weight tons of merchant tonnage."

Power Curtailment

Rapidly mounting power needs and prolonged drought have created a temporary power shortage, with the result that 40 companies in 13 states have been ordered to pool their power so that power needed in one locality may be used in another. Companies in Virginia, West Virginia, Arkansas, Louisiana, Kentucky and Ohio, which already have connections with systems in the Southeast, will pool their power with companies in Tennessee, Alabama, Georgia, Mississippi, Florida, South Carolina and North Carolina.

An order curtailing the use of power was to become effective November 10 unless heavy rains before that time should end the drought. Vital defense industries and a few others providing essential civilian services are exempt from the curtailment order.

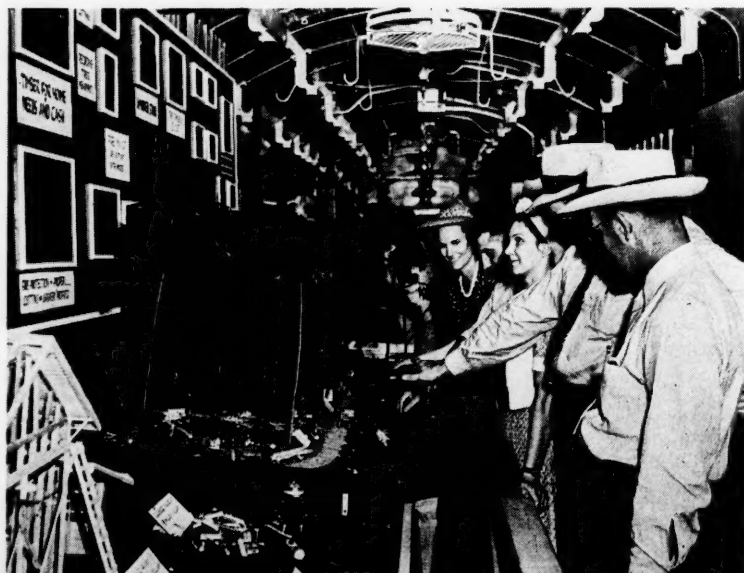
Sign lighting, show-window lighting and flood lighting of athletic fields are specifically prohibited, as well as interior or exterior lighting for decorative or advertising purposes. Not included are street and traffic lighting, or lighting required for police, fire or other public safety departments, and lighting for defense property protection.

Plastic Gliders

Contracts have been given by the Navy Department for 14 experimental gliders, including four large troop-carrying ships, built of a newly developed, wood-impregnated plastic.

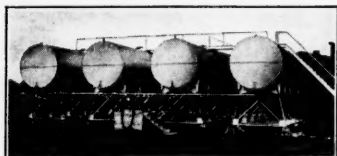
The material used has undergone extensive tests, and among its advantages are said to be that it will not pick up moisture or fungus growth; it is light and durable; easily worked into any shape, and has a long-fatigue-limit, withstanding strains, twists, shakes, etc. It is easily repaired and maintained, as breaks may be cold-patched on the field, or hot-patched in the shop.

Atlantic Coast Line's Livestock and Farm Train. An exhibit on reforestation attracted much attention on the eight-car Livestock and Better Farm Living Train recently conducted by the Atlantic Coast Line Railroad on a tour through 45 southern towns.



SOUTHLAND PRODUCTS

—WELDED OR RIVETED—



We now manufacture and offer to the trade tanks in all sizes for pressure or gravity work. Also other steel equipment of either

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CONSTRUCTION

This applies to field as well as shop built equipment.

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CHATTANOOGA BOILER & TANK CO.
CHATTANOOGA, TENN.

UNBEATABLE

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COMBINATION

CYPRESS TANKS

Nature made cypress and we made our 50 years' experience. You can't beat that combination. Plants old and new, are finding this to be true. Send us your inquiries for wood pipe. Let us send you our catalogue.

G. M. DAVIS & SON
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**SAND—GRAVEL—BRICK
FILTER GRAVEL**
Washed Sand and Gravel for Concrete
Roads and Buildings
Filter Gravel, all sizes—Building Bricks
FRIEND & CO., INC. River St., Petersburg, Va.

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**PILING, POLES, LUMBER, TIES
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WOLMANIZED AND CHROMATED ZINC CHLORIDE
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Docks for Ocean Vessels

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Plants at: New Orleans; Winnfield, La.; Louisville, Miss.
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Tank Builders For Over 80 Years!



A 40,000 Gallon Bottle!

This water tank, designed, constructed and erected by COLE, not only provides fire protection but outstanding publicity. We have made tanks in other odd shapes—bottles, etc. Does YOUR product lend itself to such unusual advertising?

Cole Tanks

Tanks of any kind and size for any purpose designed and constructed by us—storage, water, fuel oil, acid, chemicals, etc. Let our Engineering Department study your needs.

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ESTABLISHED 1854
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Standpipes	Riveted Pipe
Retorts	

*General Steel Plate Construction
designed for your requirements.*

Lancaster Iron Works Inc.
Lancaster, Pa.

Priorities

(Continued from page 48)

all possible conservation measures have been utilized and that usage will be held to "minimum practicable quantities."

Priority Assistance for Tank Manufacturers—Two preference rating orders extending priority assistance to certain prime manufacturers of component parts, armament, and accessories, for medium and lightweight tanks, were announced recently.

Preference Rating Order P-26-e complements orders P-26-a, P-26-b, P-26-c, and P-26-d, and assigns the same rating of A-1-d to delivery of materials for the manufacture of parts, accessories, and equipment for medium tanks; medium tanks and their accessories and spare parts; 37-mm. and 75-mm. guns and mounts for installation in medium tanks, and for gasoline and Diesel engines, and engine accessories, for the tanks.

Preference Rating Order P-25-e extends the priority rating of A-1-f to producers of light tanks. This rating covers the same items as are covered in the medium tank order, with the exception of the armament, which in the case of light tanks consists of 30 caliber and 37-mm. guns.

Chlorinated Rubber Under Full Control—All stocks and sales of chlorinated rubber have been placed under rigid priority control in General Preference Order M-46.

Producers of chlorinated rubber are directed to make deliveries only as ordered by the Director of Priorities, and the term "producer," defined in the order, includes all who have the rubber processed for them under toll agreement, or who have purchased, or purchase, it for re-sale, in addition to those engaged in its primary production.

New Preference Order For Crane Manufacturers—Manufacturers of cranes and hoisting equipment working on vital defense orders will receive the assistance of a new Preference Rating Order, P-5-b.

The new order replaces P-5-a, which granted a preference rating of A-1-a to deliveries of specified materials. P-5-b does not grant the same rating to all manufacturers. Ratings are to be assigned in accordance with defense needs for the particular types of crane or hoisting equipment manufactured by any one producer.

In applying the rating, a producer and his supplier must do so only in the acquisition of the materials and equipment needed to fill a defense contract, with the further restriction, in the case of suppliers, that the rating may only be used to expedite orders for material which is to be physically incorporated into the finished product, or into other materials listed.

A-10 Rating for Civilian Airplane Parts—Deliveries of necessary repair parts and accessories for all registered and certificated civilian-operated airplanes, have been granted an A-10 preference rating in an amendment to Supplementary Order P-6-a.

The original supplementary order assigned the A-10 rating to deliveries of airplanes, as well as repair parts and accessories, to certain specified types of aviation activity, including civilian

pilot training program schools, airline instrument training schools, other schools approved by the Civil Aeronautics Administration, home guard units, pipe line patrol, state and city police, power line patrol, patrol activities by any governmental agency, and experimental projects approved by the Civil Aeronautics Administration.

Deliveries to dealers for sale to any of these also carry the A-10 rating. The amendment extends this assistance to dealers supplying any operator of registered and certificated aircraft.

Airplane Parts Orders Extended—Manufacturers of airframes, and aviation engines and propellers, who have been operating with the assistance of Preference Rating Orders P-3 and P-4 will continue to receive the same aid during November and December.

The two orders, assigning preference rating A-1-c to engine and propeller manufacturers, and A-1-d to airframe makers have been extended so that there may be no lapse in aircraft production while a new type of order for the industry is being studied by OPM experts.

Farm Machinery Rating Continued—Provisions of the Farm Machinery and Equipment Rating Plan which would have expired October 31 have been extended until November 30.

These provisions, included in Preference Rating Order P-33 issued August 20, assigned the highest civilian preference rating, B-1, to deliveries of materials to manufacturers needing them for production of new farm machinery.

Extension of the plan is necessary so that there will be no break in the continuity of the farm equipment program. Work is under way on a broader plan to make materials available for new machinery to carry out the Department of Agriculture's expanded 1942 food production program.

Another order grants an A-10 rating on deliveries of materials necessary for the production of parts for the repair and maintenance of existing farm equipment. This plan (P-32) expires February 14, 1942, and is not affected by the extension of P-33.

High Repair and Maintenance Ratings for Steel Mills—With steel mills reaching an all-time high in weekly production, turning out 1,621,000 tons during the week of October 6, the Priorities Division has issued a repair and maintenance order for the iron and steel industry, which will make it possible to keep in operation the equipment, including the older and less efficient units pressed into service for the emergency, which is necessary to maintain the high production levels of the past months.

The order provides a basic preference rating of A-3 for essential repair, maintenance and operating material. For material necessary to repair actual breakdowns, an emergency rating of A-1-a will be assigned. Advance purchases of material to avert breakdowns and suspensions will be facilitated by the assignment of an A-1-c rating.

Plants to which this assistance is extended include those engaged in the production of pig iron, primary forms of steel, blast furnace coke, and ferroalloys. Producers must file with the Iron and Steel Branch, Office of Production Management, an acceptance of the order, and a statement of past inventories and consumption, on Form

PD-148, before applying the basic preference rating assigned by the order.

Fire-Fighting Apparatus Makers Given A-2 Rating for Defense Work—Manufacturers of essential fire-fighting apparatus, needed to fill defense orders, will be assisted by a preference rating of A-2 in acquiring the necessary materials.

Preference Rating Order P-45 specifically restricts the use of the A-2 rating to deliveries of material which will be physically incorporated in the finished product required to fill defense orders. A supplier, who has been furnished with a copy of the order by a producer, may apply the rating to deliveries to him of materials to be passed on to his customers, provided that they are for the uses authorized.

Reproducing Preference Rating Applications—In order to simplify the filing of applications for preference ratings, form PD-1—the standard form of application for ratings—may be reproduced by those who wish to use it.

Anyone who reproduces form PD-1 must, however, follow exactly the phraseology, the size, the format and the color of the official blanks furnished by the Division of Priorities.

In general, Priorities Division forms and orders may not be reproduced by persons using them except when reproduction is specifically authorized on the form or order.

Plant Inspection for Priority Violations—Inspectors of the Department of Labor's Wage and Hour Division have begun a nation-wide, plant-by-plant survey of hundreds of aluminum foundries to check on compliance with priorities orders and regulations.

At the same time the check is made for the OPM, the Wage and Hour inspector, for purposes of economy, will also make a routine Wage and Hour inspection of the plant visited.

Information in the hands of the Priorities Division indicates that a number of violations have occurred. In some cases it is indicated that certain manufacturers have used preference ratings to obtain critical materials which were subsequently used for non-defense purposes. In other cases preference ratings have been used to get material for inventory piling in violation of priorities regulations which state that excess inventories shall not be maintained.

Bethlehem Steel Expands

It was announced last month by the Defense Plant Corporation that negotiations had been completed with Bethlehem Steel Corporation for the construction of plants, and acquisition of facilities, for the production of pig iron, coke, open hearth steel, ingots and plates at a cost of approximately \$55,777,000. Pig iron plants will be located at various points, including one at Sparrows Point near Baltimore. Also at Sparrows Point a 720,000-ton plate mill will be built.

All of the plants will be owned by the Defense Plant Corporation, subsidiary of the Reconstruction Finance Corporation, and operated under a lease arrangement by Bethlehem Steel Corporation.



WHERE

does YOUR interest lie?

If your "business eye" as a sheet metal man immediately leaps to the circled areas in the picture above, this message is addressed to you. For the past 81 years, Lyon, Conklin has been the "metal bank" for countless sheet metal contractors and industrial plants. You would do well to ask us first in your search for sheet metals and accessories, such as metal screws, damper quadrants, cap and socket set screws, or composition roofing materials, Fibreglas dust-stop air-filters, insulating materials, etc. If anyone can supply your needs, Lyon, Conklin can!

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CONVERSE BRIDGE & STEEL CO.

Chattanooga, Tennessee

Structural Steel for all Industrial Structures,
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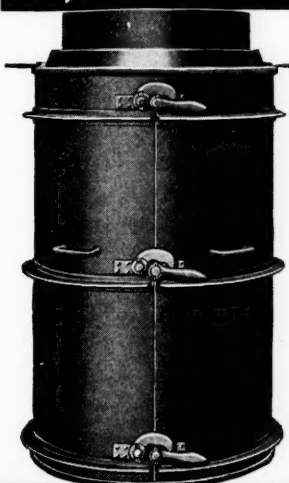
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New Plants and Expansions in the South

(Continued from page 52)

to house over-crowded departments; additions and alterations are to be made to various existing shop buildings, including large extension to machine shop; floating shop is also to be installed; Henry F. Hansson, Designer; J. E. Greiner Co., Consulting Engrs., 1201 St. Paul St., Baltimore, Md.

MISSISSIPPI

HATTIESBURG—plant—Mississippi Power Co., L. P. Sweatt, vice-president, Gulfport, will erect 20,000 k.w. steam electric generating plant on Leaf River near Hattiesburg; site, spur tract access and rights of way for connecting lines purchased.

NORTH CAROLINA

CHARLOTTE—terminals—Shell Oil Co. will erect terminal at Thrift on new Plantation Pipe Line at cost of \$150,000 and will consist of warehouse, office and garage, storage facilities and loading racks to accommodate three tank trucks and three tank cars; will cover 13 acres and will be located 7 miles west of Charlotte on State Highway No. 27; a storage tank will be provided for storing 3,360,000 gallons of regular Shell gasoline and two others of 630,000 gallon capacity and 1,050,000 gallon capacity for storing of kerosene and fuel oil; gasoline storage tank will be the nonhazardous floating-roof type; fuel oil and kerosene will be of cone roof type; warehouse, garage and office will be of brick; F. B. Johns will be Superintendent of the terminal.

CHARLOTTE—terminal—Standard Oil Co. will erect terminal at Thrift on new Plantation Pipe Line at cost of \$350,000; terminal facilities will include warehouse, garage, office, storage tanks, loading racks and other necessary buildings and equipment.

OKLAHOMA

Gas—Oklahoma Natural Gas Co., Tulsa, will build lines from Tulsa to the \$22,000,000 bombing plane assembly plant north of Tulsa and extend lines on to Skiatook and Sperry, supplying those towns with gas.

SOUTH CAROLINA

Plant—Duke Power Company acquired 12,000 acres of land in Hogback and Eastatoe Townships in upper Transylvania County and adjoining South Carolina; may erect hydro-electric plant.

CHARLESTON—drydock—Charleston Shipbuilding and Drydock Co., will have hearing at office of U. S. Engineer on application for approval of plans for a 6,000-ton floating dry-dock to be installed at Company's plant on Cooper River; Company has contracted to construct eight seagoing towboats for U. S. Navy; drydock will entail expenditure of \$2,000,000 additional on the plant; approximately \$1,000,000 is now being expended on complete rebuilding of plant for construction of the Navy vessels; plans include construction of two solid fill piers paralleled to each other and 120 feet apart; south pier will be 480 ft. long and 50 ft. wide and north pier 480 ft. long and 40 ft. wide; slip between piers will be dredged to depth of 41 ft. below mean low water to accommodate a 6,000-ton floating dry dock.

HAMPTON—plant—Plywood Products Corporation will open \$1,000,000 plywood plant in Hampton County.

TENNESSEE

MEMPHIS—expansion—Defense Plant Corporation, RPC subsidiary authorized an increase of \$340,520 in its present lease agreement with General Motors Corp., Fisher Body Division, for additional plant facilities at Memphis; \$135,775 of the increased amount will be for land improvement and buildings and \$204,745 for equipment; additional facilities will be used in production of aircraft equipment.

TEXAS

AUSTIN—plant—Union Potash Co., subsidiary of the International Agricultural

Company of New York, will build and operate a magnesium plant near Austin; plant for refining magnesium, approximate cost \$9,063,000; plant for extraction of dolomite ore, approximate cost \$1,660,000; \$1,500,000 for site, utilities and other facilities; plant will use public power produced from the multiple-purpose dams of Lower Colorado River; financed by the Defense Plant Corp., a subsidiary of the Reconstruction Finance Corp.

FREEPORT—magnesium plant—Defense Plant Corp., Washington, D. C., will spend more than \$52,000,000 for constructing plant to extract magnesium from Gulf of Mexico; new facilities to be operated by Dow Chemical Co., A. P. Ventel, Texas Manager; new plant to have capacity of 72,000,000 lbs. of magnesium annually, raising Freeport production to 108,000,000 lbs.; Dow Chemical Co. now operates an 18,000,000 lb. plant which was completed about a year ago and financed partly by the Company and partly by the British Government; a second 18,000,000 lb. plant is now nearing completion at a cost of \$8,000,000; this plant is being financed by the Defense Plant Corp.

GARLAND—plant—U. S. Government, c/o Defense Plant Corp., Washington, D. C., received bids October 23 for Diesel engine plant; brick and reinforced concrete construction; 300 x 400 ft.; cost \$750,000; will manufacture Diesel engines for tanks; J. Gordon Turnbull, Dallas, Archts. and Engrs.

HOUSTON—expansion—General Metals Corp., Harold W. Schmid, Vice President, plans \$160,000 expansion program; includes construction of 1-story, factory type building to house die shop and inspection department, corrugated iron, 7,200 sq. ft. of floor space; equipment for magnetic hardness inspection, handling, die shop, cleaning and trimming equipment and 4,000-lb. steam drop hammer installed.

HOUSTON—generating station—Ebasco Services, Inc., 2 Rector St., New York, is designing the new 35,000 k.w. steam electric generating station for Houston Lighting & Power Co., Electric Bldg., Houston.

HOUSTON—addition—Sheffield Steel Corp., Sheffield Station, Kansas City, Mo., applied to office of Production Management for approval of expansion of \$12,000,000 plant now under construction on Green's Bayou with additions to cost approximately \$20,000,000.

HOUSTON—refinery—Eastern States Petroleum Company, Inc., Keller Bldg., plans construction of \$1,000,000 refinery on the Houston Ship Channel; will acquire 60-acre site on Manchester Blvd.

VIRGINIA

PULASKI—mill—Jefferson Mills plans increasing present capacity of plant from 4,000 lbs. of nylon to 8,000 lbs.; will install 4 new sizing and 50 new coning machines, 10 additional twister machines, silk winding machines will be converted to redraws, etc.

SOUTH

Plantation Pipe Line Co., 1030 Healey Bldg., Atlanta, Ga., will soon call for bids for construction of booster stations, each to be 1-story, 80 x 38 ft., frame brick, reinforced concrete, steel sash, built-up roof, steel canopy, etc., located in Baton Rouge, La.; Osyka, Miss.; Collins, Miss.; Meridian, Miss.; Athens, Ga.; Salisbury, N. C.; Akron, Ala.; Helena, Ala.; Oxford, Ala.; Belton, S. C.; Spartanburg, S. C.; Charlotte, N. C.; Jersey, Tenn.; C. M. Guest & Sons, Anderson, S. C., has contract at \$200,000 for pumping station at Bremen, Ga. and Ralph A. Smallman, Inc., Birmingham, Ala., for station at Atlanta, Ga., Akron, Helena, and Oxford, Ala.

Trans-American Pipeline Corporation, Lincoln National Bank Bldg., 17th and H Sts., N. W., Washington, D. C., proposes construction of 12-in. pipe line, from Wichita

Falls, Texas, across northern Texas, Louisiana, Mississippi, Alabama, and Georgia, to Savannah; total of 1,050 mi.; estimated to cost \$20,535,390; require 85,000 tons of steel; carry crude and fuel oil only, to be picked up not only at western terminus of line, but also along the route; seeking Federal funds; erect six 1200-h.p. pumping stations, each with one spare unit, cost, \$56,000 each; twenty 2400-h.p. pumping stations, each with one spare unit, cost, \$100,000 each; E. Stanley Glines, president of company; Vincent G. Shinkle, Consulting Engr., 245 W. 107th St., New York.

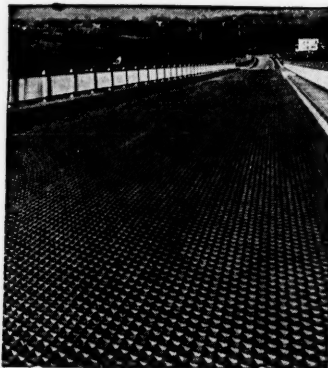
More Power For Defense

(Continued from page 37)

Aluminum Company of America will construct and operate a huge alumina plant in Arkansas, where extensive deposits of bauxite, the ore from which aluminum is obtained, are located. The new plant will have an annual capacity of 400,000,000 pounds.

Arkansas also will get an aluminum smelting plant under the deal. This 100,000,000-pound capacity factory is one of three announced simultaneously. The others will be located at Massena, N. Y., and in the Bonneville area, the first mentioned to turn out 150,000,000 pounds a year and the second, 90,000,000 pounds. Overall cost of the projects was placed at \$52,000,000.

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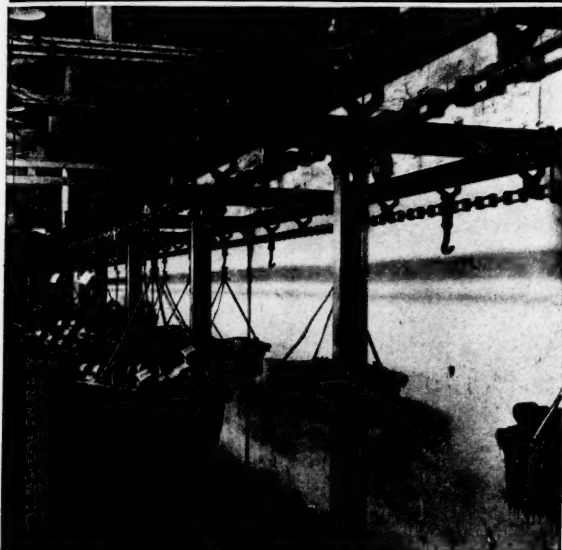
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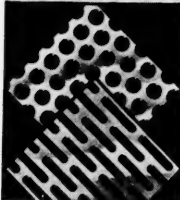
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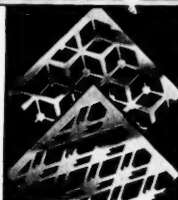
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JERSEY CITY, N. J.

Acts Hindering Defense Production Are Sabotage

(Continued from page 27)

workers and to his fellow man. I am hoping that he will see matters in this light. To threaten now to delay production in order to gain a point, however good the point may be, is not a sound or wise policy. Actually, to arrest production is to paralyze the Country at a time when the enemy may prevail by reason of that paralysis.

Too many of our people are inclined to think that this war can be won with efforts short of full sacrifice. I do not think so. We may never become involved by way of soldiers on the battlefield; but if we are not to become involved by way of soldiers on the battlefield, certainly, every man and woman in America must concentrate upon such a volume of production of the articles used in battle as will far overmatch anything that Hitler and his allies can produce. We must excel him in planes two to one, in tanks two to one, in guns two to one, and in ships ten to one. If we are not to fight ourselves with soldiers, then we must fight here at home as good soldiers in production; and we must not hesitate to make every sacrifice the Country calls upon us to make, whether it be of wages or income, rationing of food or gasoline, or anything of that sort. We will get off light if by such sacrifices we can equip those who are standing in the line of battle so fully and so constantly that we ourselves will not be required to send our boys into battle or to defend here in the New World.

There are those who seem to wish to

blame the situation upon the President. I suggest that they put the blame where it belongs, that is, upon Hitler and the totalitarian scheme of world domination. The President did not bring on this war and he is not trying to take this Country into this war. Mr. Hitler brought on this war and he hopes to take the whole world into it. The President is trying only to preserve the security of the people of the United States. He may make mistakes—as all men do—but all men must uphold his hands now even when he makes mistakes. We cannot afford to be playing politics or venting the personal tendency to criticize. This does not mean that there should not be freedom of expression and of conference, it does not mean that men should not point out injustices that may appear, but it does mean that after showing and making them respectfully and constructively, we shall unite in the common cause behind those in authority for the preservation of the security of our Republic and its inhabitants. We should preserve the character of the Republic. We should preserve the parliamentary form of open discussion and free elections; but in order to preserve these, we must voluntarily preserve also our unity, notwithstanding differences of opinion.

Mr. Hitler has left us no choice as to our course. We must resist and we must follow the constituted powers in order that we may resist in a powerful unity. This applies to the labor leaders as well as to politicians, to business people, academic people, and religious leaders. The totalitarian gets together by coercion. A democratic people must get together by voluntary action; and if they fail to get together by voluntary action,

then the Government must resort to such measures as may be necessary to bring about unity of effort, for unity of effort is indispensable to security.

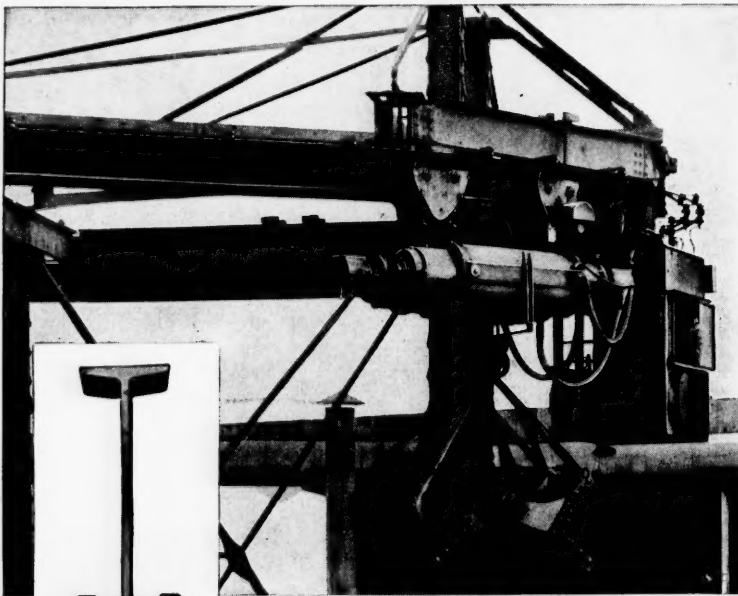
It is an ancient maxim of government and society that the safety of the people is the highest law. The maxim is so old it comes down to us in Latin, "Salus Populi Suprema Lex Est." We must bend every man, woman, and child and every activity of America to the law of the safety of the people. We must preserve this Republic. We must preserve its security. The time to do this is not sometime in the future—it is now!

Critical Materials Denied Non-Essential Public or Private Construction Projects

The Supply Priorities and Allocations Board (SPAB) announced a new policy last month under which no public or private construction projects which use critical materials, such as steel, copper, brass, bronze, aluminum, etc., may be started during the emergency unless these projects are either necessary for direct national defense, or are essential to the health and safety of the people.

Federal, state and local government agencies were urged to refrain from issuing permits for construction work on which priorities assistance would have to be denied.

Where construction actually has started, efforts will be made to get the critical materials needed to finish the job.



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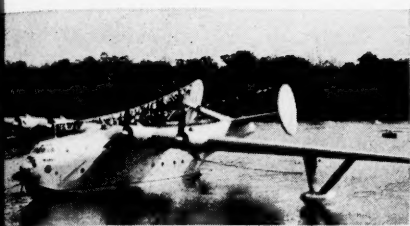
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70-Ton Navy Bomber Launched at Baltimore

The Martin XPB2M-1 Navy patrol bomber, 70-ton condor of the air, shortly after it was launched at Middle River, Baltimore, on November 8. Its wingspan is 200 feet, overall length 117 feet 3 inches, overall height, 36 feet. The four engines develop 2,000 horsepower each. Normal crew is 11 men, although as a troop transport the ship can carry 150 armed men. Cubic content of the hull equals that of a 16-room house.

New Charleston, S. C. Plant Starts

The Pittsburgh Metallurgical Company, with the announcement of the turning on of the first block of power last month at its Charleston, S. C., plant, stated that there is being considered an expansion of the plant beyond the present installation. Details were not given out as to what enlargement plans might include, but optimism was expressed as to the outlook.

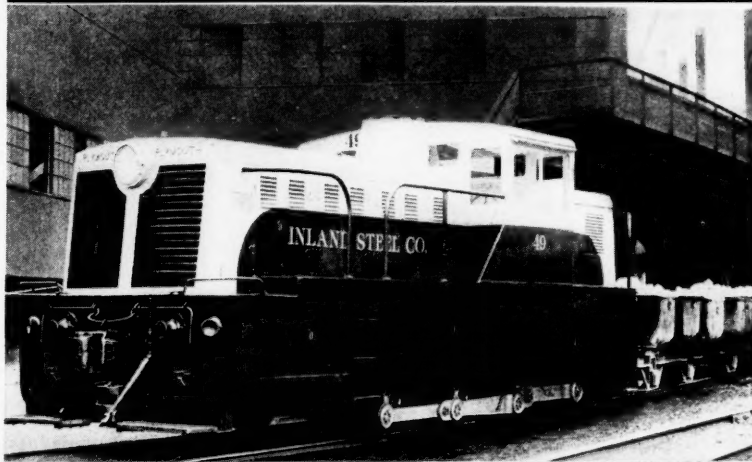
Announcement of the beginning of operations, when the first block of power was turned on, it is said, signalled the inauguration of power service at this point by the Santee-Cooper authority.

New Oil Pipeline Proposed For South

(Continued from page 39)

nection, an interesting feature of this proposed line is disclosed. One of the oldest and richest unions in the country, the International Association of Machinists have their headquarters in Washington and in that city operate a number of properties, including the City Bank with six branches and the Mount Vernon Mortgage Co. Through the latter agency the machinists have deliberately become associated with the Trans-American Pipeline Corporation on a 50-50 basis. The machinists are extremely interested in the establishment of this line and are really proud to plow their money back into American industry. The only concession Tapco has been obliged to make is in the matter of union hours and wages. The average pay will be \$47.50 a week. The Union Secretary, Mr. Davison, controlling the dues from 325,000 members, said there was ample precedent for unions owning property and operating industry.

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THE GREATEST DIESEL LOCOMOTIVE EVER BUILT

Telephone System's Success in Meeting Material Shortage

(Continued from page 35)

serves the purpose adequately. Copper has replaced aluminum in bus bars, and an annual saving of an additional 100,000 pounds of aluminum has thus been effected.

A thermo plastic is to some extent replacing Zamak, a zinc aluminum alloy, in the manufacture of the housing for combined telephone set. Since the combination of Zamak is approximately 4 per cent aluminum, .03 per cent magnesium, and about 95 per cent zinc, this is a substitution which releases for other purposes a sizable quantity of vital metals. Of all the 302 combined sets now in manufacture, 29 per cent are of plastic composition. At this rate the annual saving of zinc alone will amount to 1,600,000 pounds.

Look To Future

Looking to the future, Western Electric's engineers are considering the use of sisal and ixtle, fibrous materials readily obtainable in this hemisphere, in place of jute and burlap for cable construction.

In compliance with an order of the Director of Priorities and in view of the necessity of conserving the supply of rubber, the Company is planning a gradual reduction of its use of crude rubber which will reach a maximum of 20 per cent at the end of the year. This saving will be accomplished chiefly by the use of more reclaimed rubber in rubber compound and reduction in the

use of hard rubber by the judicious use of materials having similar properties.

In the Bell System many of the materials used in the telephone plant are not expended, but may be reclaimed and reused. Reclaiming is the specific function of the Nassau Smelting and Refining Company, purchased in 1931, a general smelter and refiner of copper, lead, zinc, tin, antimony, and their alloys from secondary sources into commercial forms such as brass, bronze, copper, bab-bitt, solder and related products.

Last year Nassau billed Western for a total of more than 42,000,000 pounds of metal. This included about 12,000,000 pounds of copper wire bar; more than 18,000,000 pounds of lead alloy for cable sheath alloy; some 2,000,000 pounds of lead sleeving; over 5,000,000 pounds of bronze wire bar for drop wire; some 500,000 pounds of brass billets; over 3,000,000 pounds of solder in various forms, and more than 373,000 pounds of redistilled slab zinc. This year's totals are expected to mount considerably higher.

Uninterrupted Production

Nassau products include bronze billets for drop wire, solder for the manufacturing and installation departments and telephone companies, lead sleeving for the Eastern area telephone companies, rosin core solder, copper wire bar; brass billets, zinc (for use in galvanizing operations, and in the manufacture of brass billets), and fine lead wires for protective apparatus.

The defense production job continues uninterrupted. Meanwhile behind the lines, so to speak, thrift and ingenuity are at work to insure a constant supply of raw materials for that production,

and equally important, to provide that Western Electric's manufacture creates no unnecessary drain on the nation's already reduced fund of raw materials.

South's First Nylon Plant

(Continued from page 31)

and similar textile articles, nylon yarn is being employed in parachutes for both the canopy fabric and shroud lines. The great strength and elasticity of the new synthetic fiber also makes it particularly adaptable for use in heavy-duty webbings and cord.

Research Is Essential

The National Association of Manufacturers reports that United States industry estimated its research costs for 1941 at \$117,490,000, or roughly 1.1 per cent of total gross sales.

The survey which arrived at this result covered 1008 firms, and was conducted by Dr. Karl T. Compton, President of the Massachusetts Institute of Technology.

Robert L. Lund, Chairman of the committee which directed the survey, said in referring to it, "here is tangible evidence of industry's faith in America's future. In industrial research lies the great hope for re-employment, for productive application of savings and for beneficial utilization of war production plants."

LINK-BELT

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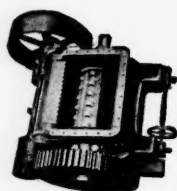
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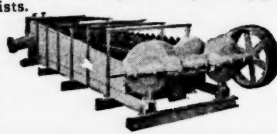
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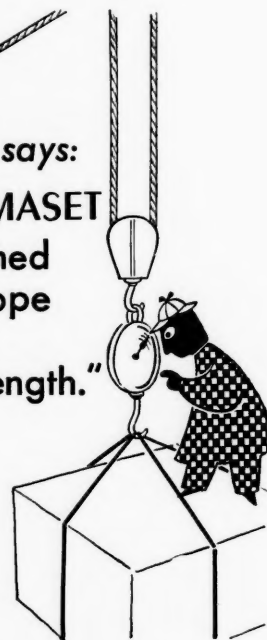


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Fig. 2633
Shallow Well
Plunger Type

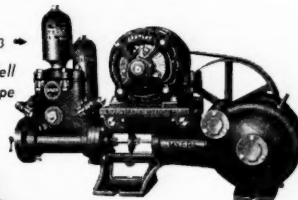


Fig. 3224
Deep Well Plunger Type

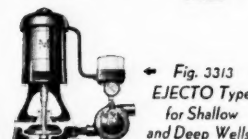
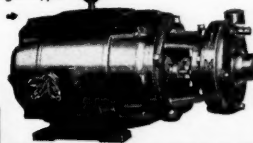
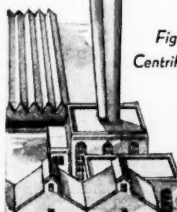


Fig. 3313
EJECTO Type
for Shallow
and Deep Wells

Fig. 3102—Double
Acting Cylinder

Fig. 3246
Sump
Pump

Fig. 2880
Centrifugal Type



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SPRAYERS • HAY TOOLS
DOOR HANGERS



South's New Wealth in Pulp and Paper

(Continued from page 33)

were forfeited for taxes because there was no income from the sale of trees or forest products. Scandinavian countries had our business, whilst our land owners were land poor and our woodsmen had no work to do.

When we were financing the Union Bag and Paper Corporation's first unit those that wished to control the installation of new facilities had their bankers go to our bankers and tell them that if they put their money into our new proposed mill they would lose the money. A strong fight was made to defeat the construction of the first unit of the Union Bag and Paper Corporation at Savannah. Since that time we have built two other units and spent some eleven million dollars; that corporation today, through its Southern investment, is in my opinion, the most soundly financed and the most soundly managed of any of the large companies. The South, too, is deeply in debt to that corporation for breaking the log-jam. From a banking viewpoint the Citizens & Southern National Bank of Savannah, Georgia, is the financial institution responsible for the financing of Unit One and all Southern timbered-land owners and all woodsmen should be grateful to that institution for the services rendered. Now, what happened after Savannah.

The Log-Jam Broken

Since 1935, the mills that have been built and my estimate of their capacity follows:

	Tons Annually
Union Bag & Paper Corp.	250,000
West Virginia Pulp & Paper Co., Charleston	140,000
Georgetown	210,000
Plymouth, N. C.	70,000
National Container, Jackson- ville	70,000
Two mills, Fernandina, Fla. ..	140,000
Brunswick	70,000
Crossett	60,000
Springhill	280,000
St. Joe	120,000
Franklin, Va.	60,000
Houston, Texas	70,000
Lufkin, Texas	50,000
Florida Pulp and Paper Com- pany	25,000
St. Mary's	35,000

Total1,650,000

The total is approximately 1,650,000 tons. The old mills have had their capacities raised during that time, it is reported, that will cause the new production from 1935 till now to equal approximately two million tons, or the equivalent in fiber weight to eight million bales of cotton (500 lbs. each).

Expansion such as is listed here goes to show that no group of men can thwart the development of industrial and agricultural progress when all economic advantages about that new plants should be built where all economic advantages favor the cost that will save the ultimate consumer money, and give permanent jobs to idle woodsmen.

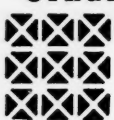
The group of men that brought about this industrial expansion has done, in my opinion, the greatest job in the short space of time industrially of any

single group of men in American industrial history. The capital required to bring this about has not been so great, but the results to forestry and the results to industry have been momentous. The expansion program represents approximately 40,000 new jobs taken out of the Scandinavian countries and brought to the South. The capital invested amounts to less than approximately one hundred-fifty million dollars. The gross sales for the entire pulp and paper business for the South this year will probably amount to two million dollars.

Iron and Steel Scrap Shortage

A. D. Whiteside, Chief of the Iron and Steel Branch, Materials Division, OPM, states that "a serious shortage of iron and steel scrap is imminent. Compared with a total consumption of 26,800,000 gross tons in 1917, the peak year of the first World War, steel mills and foundries in the first nine months of 1941 already had consumed over 39,000,000 gross tons. The indicated requirements for all 1941 is 52,000,000 gross tons. From dealers, who would prepare and ship to the mills such scrap as would be attracted out by a program such as Michigan is undertaking, the government is expecting 28,000,000 tons this year, compared with 17,000,000 tons last year. . . . To keep steel mills and foundries operating at capacity, principally on defense, it will be necessary to bring out every possible ton of iron and steel scrap from every potential source."

Ornamental and Industrial

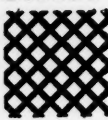


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